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ORIGINAL ARTICLES.

EXPERIMENTAL UNION OF THE URETER AFTER TRANSVERSE DIVISION.

BY WELLER VAN HOOK, A.B., M.D.,
OF CHICAGO.

[*Preliminary Contribution.*]

Hitherto experimental surgery has not supplied the practitioner with a method by which the continuity of the ureter, when completely divided by transverse injury, could be restored. The brilliant case reported recently in full by Kuester,[1] in which the upper end of the ureter—the infundibuliform

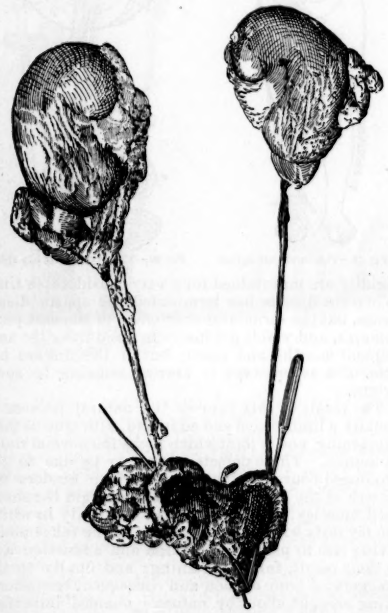

FIG. 1.

portion—was excised to relieve obstruction, has been exceeded in ingenuity of conception by the work of Prof. Christian Fenger, in two cases reported at the meeting of the Chicago Medical Society held February 6, 1893. But these cases offer no suggestions to aid in the effort to unite the ends of the transversely divided ureter when that injury occurs below the infundibulum. The experiments of Th. Tuffier,[2] who endeavored to accomplish this object by the application of sutures, are discouraging in the extreme. For even when union took place, the resulting scar contraction of course obliterated the lumen of the duct.

To obviate the necessity of making a line of sutures around so narrow a tube, the writer put in practice the following plan: The ureter of a medium-sized dog having been exposed and isolated at a point one inch above the entrance of the ureter into the bladder, the duct was cut across with scissors, and one-half inch of its extent cut out and discarded. The free end of the lower portion of the ureter was then closed by a ligature near the point of severance. Next a longitudinal slit about three-eighths of an inch long was made in the side of this portion of the

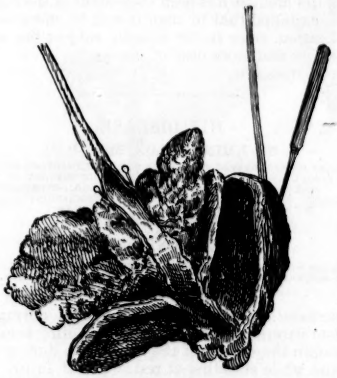

FIG. 2.

tube, about one-fourth of an inch below the ligature. A suture was passed through the wall of the upper fragment of the ureter, the opening of which had been enlarged slightly with the scissors. The point of the needle with which the suture was armed was passed through the slit in the lower portion of the ureter, and carried down the lumen of the tube for a half inch, then pushed through its wall. By gentle traction the upper piece of the ureter was then invaginated into the lower portion, and held there by fastening the suture to the outer layer of the wall of the tube. Two delicate sutures were then passed at the ends of the slit in the wall of the lower portion, to favor rapid union, and the whole site of operation upon the ureter was carefully covered by a fold of the abundant omentum.

[1] Langenbeck's Arch., Bd. 44, S. 850.

[2] Étude Experimentales sur la Chirurgie du Rein, Paris, 1889.

The dog recovered with no ill effects whatever, and was killed twenty-six days afterward. There were no adhesions in the peritoneal cavity, except where the omentum had been sewed down. There was complete permeability of both ureters, as shown by the probe passing in Figure 1, through the ureters into the bladder. Upon laying open the right ureter, which had been the subject of operation, the mucous membrane was seen to be continuous, perfectly healed at the point of junction, and presenting no diminution of caliber. This lack of stricture formation was to be expected from the fact that the line of primary union was necessarily an oval, not a circle, corresponding to the shape of the slit as distended by the invaginating end of the ureter. The line of scar tissue must thus necessarily be long enough to more than accommodate the lumen of the ureter. The fact that one portion of the tube must enter the lumen of the other tube, does not constitute an objection to the method, since the lumen of the tube can be enormously increased by stretching, without prejudice to the integrity of its walls.

Figure 2 shows the right ureter laid open from a point one inch above the line of union to the cystic end of the ureter. Around the ureter is the piece of omentum used as a covering to the wounded surfaces. The left ureter appears smaller, because somewhat dried at the time the photograph was made.

As the method has been successful in the dog, it is to be expected that in man it will be more easy of application, since in the human subject the ureters are larger and more easy of access.

858 W. Monroe St.

HIP DISEASE.

BY JOHN RIDLON, M.A., M.D.,

LECTURER ON ORTHOPEDIC SURGERY IN THE NORTHWESTERN UNIVERSITY MEDICAL SCHOOL; PROFESSOR OF ORTHOPEDIC SURGERY IN THE POST-GRADUATE MEDICAL SCHOOL, CHICAGO; SECRETARY OF THE AMERICAN ORTHOPEDIC ASSOCIATION; ATTENDING ORTHOPEDIC SURGEON TO ST. LUKE'S FREE HOSPITAL, CHICAGO,

AND ROBERT JONES, F. R. C. S., E.,

HONORARY SURGEON ROYAL SOUTHERN HOSPITAL, LIVERPOOL; CORRESPONDING MEMBER AMERICAN ORTHOPEDIC ASSOCIATION.

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Treatment:—It is the function of a normal hip joint to permit of motion in several directions and to sustain the weight of the body, both during walking and while standing at rest, without injury to its structure. When a joint becomes diseased these functions become restricted or abolished, motion is no longer possible, or possible to only a limited degree, and the joint refuses to sustain the superincumbent weight for any prolonged period.

If we study the clinical evidences presenting at a hip joint, as it passes from health to disease and back to health again, we find them to be somewhat as follows: all the muscles, whose functions it is to move the thigh on the pelvis, gradually become more and more rigid from invuluntary muscular spasm until all motion at the joint is abolished. The thigh becomes gradually flexed on the pelvis, and usually at first abducted (Fig. 5); later on as flexion increases it becomes adducted (Fig. 6), but in either case the position is such that in walking the full weight is not thrown upon the diseased member for more than a brief time at each step, and prolonged weight bearing, while standing at rest, is not possible.

The joint becomes more and more sensitive to the vibration of locomotion, weight bearing is no longer tolerated, and the patient takes to his bed. The leg in any case assumes the position of greatest comfort and the muscular spasm protects the joint which by this means becomes locked. As the patient drops asleep the muscular spasm relaxes somewhat, and, if the limb does not lie securely fixed, motion takes place at the joint, injury is inflicted, the patient screams with pain, and the muscles are again on guard. Long continued malposition results in structural shortening of the tissues on the side of the flexion and finally immobilization of the joint is maintained with but little muscular effort. When the joint has been freed from motion and weight bearing for a certain time the tenderness passes off, and the patient is able to move about his bed without suffering and ultimately arises and walks, often bearing his whole weight upon the affected member without pain. Nevertheless muscular spasm and

Fig. 19.—The Davis hip splint.

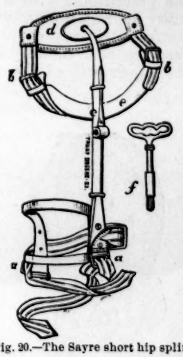

Fig. 20.—The Sayre short hip splint.

rigidity are maintained for a very considerable time. When the disease has terminated the spasm disappears, but the structural shortening of the soft parts remains, and yields gradually to use during the subsequent months and years; but if the disease has been of a severe type, it always remains to some extent.

The result of this cure by the natural process is usually a limb flexed and adducted, with true or false shortening, and a joint which lacks the normal rangs of motion. These defects appear to be due to the prolonged course of the disease, which hinders the growth of the limb and renders more rigid the shortened muscles; to the position of deformity in which the leg rests while structural shortening takes place, giving rise to permanent flexion and adduction and to their result, false shortening; and finally to the exaggerated bone erosion and consequent true shortening brought about by nature's unaided imperfect immobilization and protection.

The efforts of nature to effect a cure may be supplemented by art. The means which art adopts are: to protect from deformity, or, if it has already appeared, to correct it, and thus it robs the muscular contracture of its deforming power; to immobilize the joint, and thus relieve the muscles from a state of spasm and subsequent contracture; to relieve pain and prevent the bone destruction due to both

attrition and pressure; to relieve the joint from weight-bearing, and the pressure arising therefrom; and finally, to diminish all these by shortening the course of the disease. The all essential element of treatment, beyond the correction of any existing deformity, may be summed up in one word—rest. The ideal treatment would be *perfect* rest of the joint from active and passive motion, from the jarring incident to all locomotion, and from intra-articular pressure due either to muscular spasm or to weight-bearing. Such an ideal treatment we do not think has ever been attained.

The fathers in surgery treated hip disease by rest in bed and by more or less successful attempts at immobilization. Decros, in the *Gazette des Hospitaux* of June 30, 1835, published a case of hip disease in which traction was employed. In 1839, J. H. James, of Exeter, England, presented at the Provincial Medical and Surgical Association, at Liverpool, a plan of immobilization for the treatment of fractures of the thigh, by the use of traction in the axis of the shaft of the femur. In the same year William Harris, of Philadelphia, published a series of four cases of hip disease in the *Medical Examiner*, January 19, treated by traction and counter-traction combined with Hagedorn's apparatus for fractured thigh. The first of these cases was four months after Decros' paper.

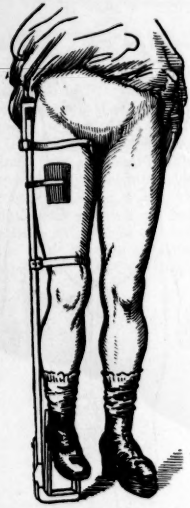

Fig. 21.—The Taylor hip splint.

Fig. 22.—Judson's hip splint.

The first portable traction hip splint was devised by Ferdinand Martin and is illustrated in Bonnet's "Therapeutics of Articular Disease," Paris, 1853.

Following these, traction was used by various surgeons with weight and pulley and other devices, as a means of immobilization in the treatment of hip disease. In 1859, Henry G. Davis, then a resident of New York City, presented a plan of treatment essentially different in principle from any that had been previously employed. It consisted of a mechanical device, intended to give elastic traction and counter-traction at the hip joint, without restriction of the normal motions of that articulation, the attempt being to separate the articular surfaces and to thus obtain "motion without friction" at the joint (Fig. 19). Another radical change in principle was that the apparatus was to be employed while the patient walked, it being expected to furnish ample protection to the joint from the traumatism of locomotion. These principles of an ambulatory apparatus, which permitted motion at the joint and protected it by elastic traction and counter-traction, were at once adopted by Dr. Lewis A. Sayre, Dr. Charles Fayette Taylor, and others, and the treatment, which was believed to allow "motion without friction," became known as the American plan of treatment (Fig. 20).

It is perhaps, unnecessary to say that the principles upon which this treatment was based have been

Fig. 23.—The Sayre long hip splint.

Fig. 24.—Shaffer's hip splint.

entirely abandoned by the profession. Traction obtained by a mechanical device, known as the long traction hip splint, is still used both during recumbency and during locomotion, but it is no longer used with the idea that "motion without friction" is a mechanical possibility. Perhaps the best commentary upon the use of the long traction hip (Fig. 21) splint is found in the fact that in the city of New York three of the veterans in the profession use practically the same splint in the same way for the accomplishment of three different ends—namely, Dr. Judson (Fig. 22) uses the splint for the fixation it gives, Dr. Sayre (Fig. 23) uses it for the motion which it permits, while Dr. Shaffer believes the beneficial effect chiefly rests in the traction which it exercises (Fig. 24).

We would not be understood as denying that inelastic uninterrupted traction is an effective, though by no means the most effective, means of obtaining fixation during recumbency; but traction applied by means of any apparatus upon which the patient

walks, not only fails in immobilizing, or in being a useful immobilizing adjunct to any other apparatus, but it actually increases motion, tremor, and irritation at the articulation. This was pointed out so long ago as 1879, by the late Joseph C. Hutchinson, of Brooklyn. It is only necessary to observe a child walking upon a long traction hip splint to recognize this fact. The hip splint is applied whilst the patient is recumbent, with a traction of eight or ten pounds. The weight of the splint is from four to six pounds. When the patient stands upon the healthy extremity

Fig. 25.—Ridlon's long traction hip splint, with friction body piece. This splint is no longer made use of by the authors.

and lifts the affected member and splint the traction upon the joint is from twelve to sixteen pounds.

In taking the first step the splint is placed upon the ground and the sound limb lifted, when the whole weight of the patient, from fifty to one hundred and fifty pounds, is thrown upon the perineal supports. They yield somewhat, the splint

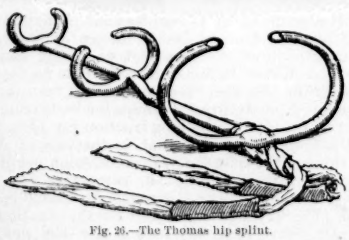

Fig. 26.—The Thomas hip splint.

bends a little and the traction force is entirely relaxed, as shown by the straps bagging at the ankle; with the next step, when the splint is raised from the ground, fifteen pounds of traction is again in force. We have thus an alternate traction of fifteen pounds and a relaxation which allows almost the full force of the muscular spasm to drive the bone upward into the diseased socket. This push-and-pull or pumping action at the joint goes on with each step at the rate of at least three thousand strokes an hour as the child runs about in his ordinary play. It would appear then, that the traction splint used during locomotion is an excellent means for increasing motion at the joint, and that there is no excuse for those surgeons who use this device as a means of immobilization, or with the idea that it gives continuous traction. Traction may add to effective immobilization, and in convalescent cases may be used without serious harm, provided the patient uses crutches and has a patten on the foot of the sound side sufficiently high to effectually prevent during locomotion the apparatus

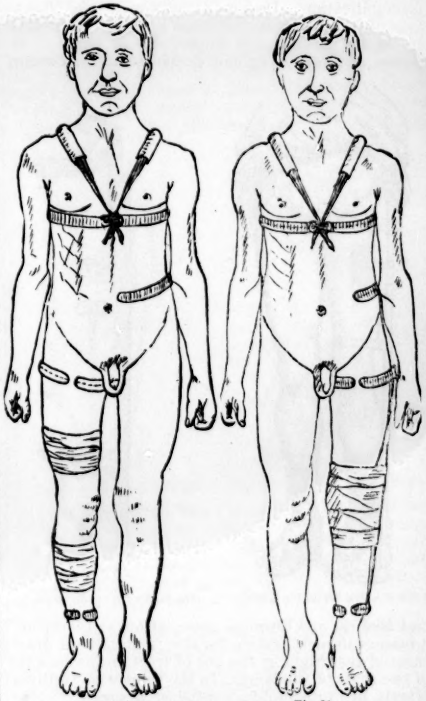

Fig. 27. Fig. 28.

Fig. 27 showing adduction wing.
Fig. 28 showing abduction wing.

from coming in contact with the ground. We do not advocate this plan of treatment, because we think that so long as it is thought a patient can find any relief or benefit from the use of traction, he should be confined to the recumbent posture. When the joint has sufficiently recovered to warrant locomotion, traction is unnecessary. In the case of the hip it is especially so. Surgeons advocate it on the plea that it diminishes intra-articular pressure. In early coxitis it can only induce pressure upon the lower and inner aspect of acetabulum and the corresponding portion of the femur. In the late stage it can only viciously pull upon the soft structures helping

to form the joint. Apparatuses devised to give traction during locomotion are expensive, difficult of application, easily misplaced, require frequent attention, are harmful if used during the stage of pain and useless after it has passed. We have used the long traction hip splint (Fig. 25) in many hundred cases of hip disease, and we have abandoned its use because it does not, at best, readily overcome deformity; it permits the development of a marked degree of flexion with abduction or adduction, in cases where no deformity at first existed; because under its use patients suffer again and again from exacerbations

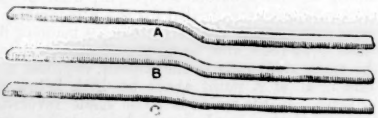

Fig. 29.—Outlines of the main stem of the Thomas hip splint. A, For stout patient. C, For thin patient.

of pain and increase of deformity which always force them to bed for a longer or shorter period; and because under its use the period of treatment is exceedingly long and the results far from perfect. Nearly all cases, when cured, present the deformity of flexion and adduction and the false shortening arising therefrom; they present a great rigidity and considerable real shortening, and not a few of them a functionless flail joint at the knee from the indefinitely prolonged pull. All that is necessary for the safe conduct of the joint may be obtained by the use of an apparatus simple of construction, slight of cost, easy of appli-

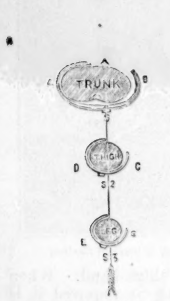

Fig. 30.—Shematic showing of the relation of the main stem to chest, thigh and leg.

Fig. 31.—Twisting the stem.

cation, not readily misplaced, rarely requiring attention, more effective to overcome deformity, to prevent the development of deformity, and to allay muscular spasm and pain, than any traction apparatus with which we are familiar.

We do not describe any apparatus of the many in general demand, except that which we ourselves have in constant use in all our cases. This apparatus is known to the profesion as the Thomas hip splint (Fig. 26), known so deservedly, because it was first used by the late Hugh Owen Thomas, of Liverpool, as a means of immobilization by antero-posterior leverage in the treatment of hip disease; but it is to the principles upon which this splint is used, rather than to its general form, that the name of Thomas should be applied, for unless the splint be used upon these principles, it may be a wholly worthless incumbrance.

Before the time of Mr. Thomas a somewhat similar device was used by Mr. Hilton to overcome deformity, and since the time Mr. Thomas first gave the splint to the profession others have used apparatuses looking somewhat like his splint, but wholly ineffective, either because of their shape or flexibility, or rendered useless by the addition of traction forces applied either in a lateral or longitudinal direction. *The Thomas splint is intended to immobilize the hip*

Fig. 32.—Wrench for bending and fitting the Thomas hip splint.

joint by a direct antero-posterior leverage action. By this action it reduces the deformity, or opposes a tendency to deformity. By its weight and rigidity it steadies the inflamed articulation and quickly relieves muscular tremor.

The Thomas Hip Splint.—The Thomas hip splint consists of a main stem, a chest band, a thigh band, and a calf band, and occasionally of an abduction or adduction wing passing round the flank (Figs. 27 and 28). The splint is constructed of the softest and

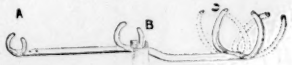

Fig. 33.—Bandage over outer wing of thigh band, and wings of chest band drawn up or down.

toughest iron. Annealed steel is not the material to be used, inasmuch as sufficient rigidity cannot be obtained without rendering the parts too difficult to easily mould to the contour of the patient.

Most serious results accrue from making splints too light, and the following practical instructions may be useful: For an adult of about six feet the upright should measure $1\frac{1}{4}x\frac{1}{4}$ inch; for an adult of about five feet six inches the upright should measure $1\frac{1}{4}x\frac{3}{16}$ inch; in a boy of ten the upright should measure $\frac{3}{4}x\frac{3}{16}$ inch; for a child of five the upright should measure $\frac{1}{2}x\frac{5}{32}$ inch; for an infant of two the upright should measure $\frac{1}{2}x\frac{1}{8}$ inch.

In length it reaches from the lower angle of the scapula to the junction of the middle and lower third of the leg, passing down posteriorly to the hip joint. In growing children it is customary to make that portion below the joint somewhat longer than that above, but nothing is gained in immobilization by making one part longer than the other, taking the hip joint as the middle point. The upright stem is bent in two places, one opposite the fold of the buttock, the other just above the joint, so that the leg portion and body portion follow parallel lines distant from each other from one-half to two inches, this distance depending upon the size and stoutness of the patient (Fig. 29).

As a rule, the stouter the patient the nearer do these parallel lines approach each other. In a case where the trochanter is enormously hypertrophied the buttock bend may be entirely dispensed with, and

in that case the body and thigh portions of the upright form a straight line. The bends referred to should be rather rounded than angular, as may be seen in the illustration. The leg portion from the fold of the buttock to the lower end is perfectly straight, as is the portion from the bend opposite the joint to the upper end. The stem is usually twisted somewhat in its longitudinal axis, so that the body portion lies slightly to the side and flat against the curved outline of the chest, while the leg portion lies directly posterior to the middle line of the leg (Fig. 30). The buttock portion lies between the great trochanter and the ischial tuberosity. The twist varies according to certain conditions, which will be hereafter referred to in describing the adjustment of

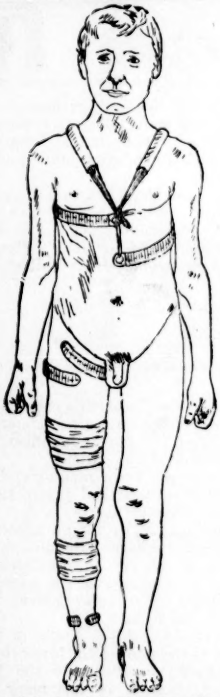

Fig. 34.—Left wing of chest band drawn down to adduct the right limb.

the splint. The chest band is also made of flat bar iron, which varies in width and thickness in proportion to the size of the patient—usually from $\frac{3}{4}$ to $1\frac{1}{4}$ inch wide by $\frac{3}{32}$ inch thick. It should be long enough to encircle the chest to within an inch or two. If the splint be made reversible, so that it may be applied to either leg, as is customary in hospital work, it is joined at its middle to the upper end of the stem, whereas if it is to be used only in a certain individual case, it is joined from one or two inches to one side of its middle, so that one wing will be longer than the other. The longer wing encircles the chest opposite to the diseased side, its greater length being due to the greater distance it has to travel. The relative length of these wings may be determined by measuring from the lower angle of the scapula around each side to the front, where it is intended that they should terminate. There is no special advantage in having these wings to end opposite each other, although it may perhaps make a somewhat neater looking apparatus. The upper end of the main stem is forged flat and bent over the chest band, and the two are made fast by a single rivet. In each end of the chest band a hole, three-quarters of an inch in diameter, is forged for the fastening of the shoulder straps; or, what is less convenient, holes are drilled for the attachment of buckles, or bandage. The thigh band is made of flat bar iron, $\frac{1}{16} \times \frac{3}{4}$ inch, and, being placed on the surface of the main stem next to the patient, is joined to it by one rivet at a point about an inch below the lower bend. If the splint is to be made reversible the wings of this band should be made of equal length: if it is intended for one side only the inner wing is made an inch or two longer than the outer. The calf-band is also made of flat bar-iron, $\frac{1}{16} \times \frac{5}{8}$ inch. and is joined to the lower end of the stem by a single rivet in the same manner and with the same rel-

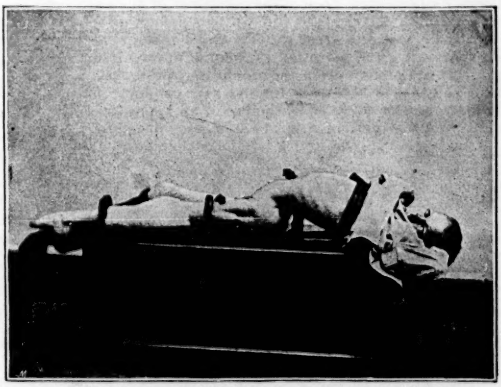

Fig. 35.—Showing possible lordosis in correcting a case of marked flexion.

ative lengths of wings as the thigh-band. When an abduction or adduction wing is required it is made from the same sized iron as the thigh-band. This should be placed at such a point that it will pass around the flank midway between the crest of the ilium and the ribs. This point is usually about midway between the buttock bend and the chest-band. The wings or bands are bent approximately to fit the imaginary patient, and the surface of the entire splint next the patient is covered with felt, either harness-makers felt, or what is better, ordinary boiler felting of one-fourth inch thickness. The whole is then covered with that kind of sheep-skin known to the trade as bazil leather, or "tan sheep." This should be put on wet and snugly stitched into place, so that as it dries the shrinking will prevent any slipping upon the iron. The stitching of this leather is of course done on the surface of the splint away from the patient; it may be done with the so-called ball-stitch, or, what is more ser-

viceable but less neat, the two edges of the leather may be drawn up together and sewed through after the manner of the harness-maker with a double waxed end; the redundant portion of the leather is then trimmed off.

The splint is then applied while the patient rests upon his back, the wings upon the side away from the deformity being opened out sufficiently to slied the splint under the patient from the affected side without unnecessary jar or movement. When the main stem rests in place, the leg portion will be directly behind the middle line of the thigh and leg, the part between the bends directly at the back of hip joint, and the body portion somewhat to the outer side of this line, the whole lying flat against the chest,

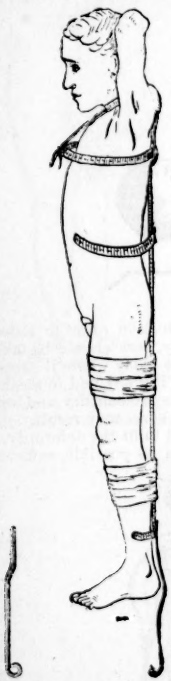

Fig 36. Fig. 37.

Fig. 36.—Nurse. Fig. 37.—Nurse attached having an abduction wing.

thigh and leg. This fitting may be done approximately by the hands, but better by wrenches (Fig. 31) hereafter to be described. The wings to the inner side of leg and thigh and the wing of the chest-band on the same side, namely those on the side away from the diseased articulation, are drawn more closely than those on the affected side (Fig. 30). The reason for this is that the splint tends somewhat to the affected side of the patient and to draw the leg into abduction.

Particular attention must be paid to the bending of the body wings. As the chest is not circular it is necessary that the body wings should not be made circular, else intolerable soreness will result. By closely examining Fig. 30 this will be seen. The part between A and B upon which the patient lies is but very slightly curved and this allows the body to rest comfortably and travel easily towards the diseased side B, which is of great advantage.

Another very simple expedient consists in making a small hole in the bandage and passing it over the outer of the thigh wings and rolling it under splint and thigh and round the limb, so that the appliance is pulled in the opposite direction to that which it tends to travel. When satisfactorily fitted a short piece of bandage is wrapped around the splint and leg at the lower extremity and pinned securely, and another wrapped around the thigh above the knee, or, what serves in some cases more satisfactorily, a single piece is wrapped around the knee in the figure-of-eight fashion and pinned with a large pin directly through the covering at the back of the splint, so that the bandage cannot slip upon the splint, and any tendency of the splint to slip downward is avoided.

Fig. 38.—Changing the skin under the splint.

If the splint be found too large, or when the patient grows, too small, it may be necessary to modify or increase its length. This is quite simply done. If it be too large draw both body wings towards the abdomen; if too short draw them towards the neck. The dotted lines (Fig. 33) will explain this. A strip of broad bandage is then looped around the upper end of the stem below the chest-band, and having been twisted two or three times so that the ends will separate high upon the back (Fig. 38), each end is carried over a shoulder and brought down to the hole in the end of the chest-band like a pair of braces (Fig. 27); here each is tied securely, crossed to the hole at the opposite side and again tied, when the ends are tied together. The final knot should be secured either with a long pin driven through it and twisted at its end, or with a bit of adhesive plaster. The splint should be applied without bending it from the shape already described if it is possible to force the leg at the knee reasonably near the splint. The lumber spine readily curves when there is flexion at the hip suffi-

ciently to allow the limb to be brought down to the splint when there is as much deformity as fifty degrees; but if the deformity be very great, as much, perhaps, as nineteen degrees, it may be necessary to bend the splint just enough to get the limb in contact with it when the fullest possible lordosis has been obtained (Fig. 35). In these cases the bending is done at the upper bend of the main stem, directly at the back of the hip joint. In practice, however, this will rarely be found necessary, and has its disadvantages.

leather. Lead foil plaster is alone placed around the body wings and stem. If the splint has been accurately fitted no sore or excoriation results.

If it is desired to prevent a patient from walking, a strip of iron is screwed to the lower end of the splint, and may be bent to pass free of the heel, and carried ten or twelve inches below the foot, so that standing or walking is quite impossible. This piece is called a "nurse," and will be found, when children are restless, a safe precaution during the period of recumbency (Figs. 36 and 37). If severe leverage be

Fig. 39.—Lifting a patient in the splint.

If there exists any considerable degree of abduction a wing should be attached as already directed, passing around the flank on the side opposite to the disease. If there be any considerable adduction the wing is attached to the same point, but passed around the flank on the side where the disease is located. Care should be taken to draw these wings well in between the ilium and ribs, since pressure is

Fig. 40.—The patten.

not tolerated over these bony points. At other times these body wings are drawn down into the position taken by abduction or adduction wings when one cannot conveniently procure the additional wings. In case of the very poor the hip splint is often applied by one of the authors without padding or

brought to bear over the buttock in order to reduce a marked and rigid deformity, care should be taken to shift the skin about twice a day where it presses with most force on the stem (Fig. 38), and to see that all parts about the hips are kept clean, dry, and well-powdered, otherwise pressure sores may result.

If the splint has been bent to fit the deformity, it must be straightened as soon as possible, sufficient

Fig. 41.

opiate being given to quiet the pain during the few hours or days of the reduction of the deformity. During this time, of course, the patient must remain in bed, and recumbency should be maintained until all pain and intense muscular spasm has subsided. When the deformity has been reduced the leg should be scarcely at all interfered with, the splint should

not be removed, motion should not be tested, even the bandage at the knee should not be changed except they become slack or soiled. The most absolute quiet to the joint and to the patient must be enjoined, and the necesities of nature should be attended to by gently lifting both lower extremities and inserting the bed pan. This can be done without causing pain in even the most sensitive joint. The good limb is placed gently across the diseased one, and the nurse lifts the patient by placing one hand under the splint just below the knee, while with the other she lifts the chest band (Fig. 39). When all pain, tenderness, and muscular spasm have been quiescent for some weeks, and when no sign of fluctuation can be made out about the joint, the patient may be allowed to arise and get about on crutches, aided by a patten on the sound limb.

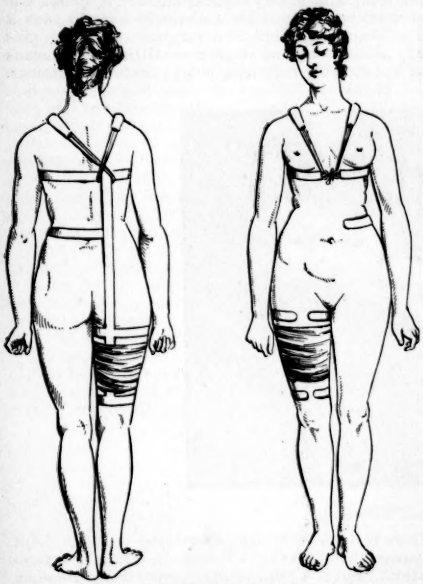

Fig. 42.—The short, or walking brace used during convalescence.

The patten consists of an iron ring with two uprights, the ring resting on the ground and the uprights rising from the front and back, reaching to the shoe and fastening to the heel and sole (Fig. 40). The ring is oval shaped and is made of square bar-iron not less than three-eighths of an inch thick. It reaches from the ball of the foot to the middle of the heel and its width is slightly more than that of the sole of the shoe. The uprights are of round bar-iron

Fig. 43.—The Thomas flexion test position.

set at right angles to the plane of the oval ring, and should at their lower ends be welded to it, their upper ends are forged flat, pierced with three holes and bent forward. If the patten is to be attached to a thin-soled shoe it will be better to rivet these flattened ends to a metal plate shaped to fit the sole of the shoe and screwed to it. The height of the patten depends upon the size of the patient and should be from four to six inches, high enough to prevent the patient from reaching the ground with the toe of the affected side. This with the ordinary axillary crutches completes the walking outfit (Fig. 41).

For the most perfect result the patient should be kept recumbent until all pain, tenderness and muscular spasm have subsided. He may then walk about on crutches and patten until all the soft tissues about the joint are well atropied and all trace of the disease has disappeared.

The patten may be then dispensed with and the

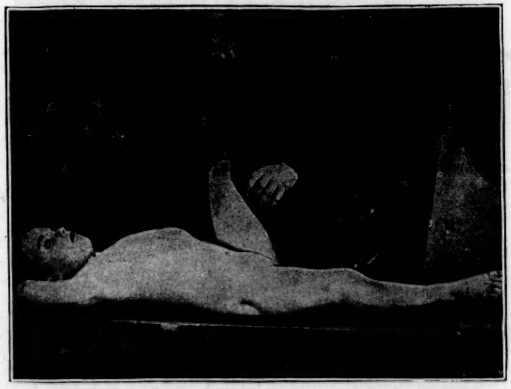

Fig. 44.—Sinus healed. Good position.

crutches shortened, and in this manner he may go about for two or three months. If there be no evident return of the disease the crutches may now be thrown aside and the joint further tested by two or three months' use. All still going well, the splint is now cut off at the knee so as to permit of flexion there, a band being attached at the lower end after the same manner as the calf band (Fig. 42).

Fig. 45.—Flexion of thigh. Sinues open.

This short walking splint having been worn for two or three months, and there being no return of the symptoms of the disease the splint is removed at night for a month or two. If the joint remains well the splint is removed for certain hours during the day and then altogether, and the joint finally tested for perfect cure.

The joint should be imprisoned long after the appearance of disease has gone and after all subjective symptoms have disappeared, for the sensations experienced by a patient recovering from articular disease cannot be very reliable under the masking influence of a splint. The test comes on removal of restraint, and a very critical time it is unless the surgeon has grasped the knowledge whereby such a test becomes reliable. No surgical text-books give any allusion beyond vague generalities to the means of knowing the right moment to discard treatment.

There is no more danger of relapse in cured joint disease, than there is of disease in a healthy articulation. But if a joint be pronounced fit for use when the remnants of inflammation have not gone, it is easy to understand the very frequent references to relapse which meets us everywhere. The law may be again laid down. *A joint is cured of disease where the range of movement does not diminish by use, or in those cases resulting in anchylosis a cure may be pronounced where the angle does not change after use.*

Fig. 46.—Same case as fig. ; flexion reduced and sinuses closed.

All patients should be examined at the commencement of treatment for the purpose of diagnosis and record, and again at the close of treatment for a comparative record and for the diagnosis of a cure. In each instance the patient should if it is practicable, be entirely stripped of all clothing the attitude should be noted in standing, walking, and lying, the amount of motion at the articulation compared with that of the sound side, the member measured for both real and false shortening, for abduction, adduction, flexion and atrophy.

It is our effort to encourage rather than otherwise the production of abduction in the cure of hip disease. It diminishes the amount of practical shortening caused by displacement, erosion or arrest of growth. By recognizing this we are sometimes able, where there is perhaps two inches actual shortening, to slant the pelvis sufficiently to render the apparent or practical measurement equal on either side.

To render the pelvis flat in a definite position it is customary for us to put the patient in what is known as Thomas's "flexion test" position (Fig. 43). This consists in flexion of the thigh of the sound side upon the trunk, so far that the elbow of that side can be hooked into the flexure at the knee and the forearm carried across the body. This gives a sufficiently definite position to render measurement, made at different times by the same or different surgeons, comparatively accurate, although unless the surgeon be careful, flexion to the Thomas position in some cases tilts the pelvis upwards and renders the record of deformity not only that of the existing flexion but also that of the amount of normal extension.

These deformities may, perhaps, be more accurately measured with the goniometer, but the measurement with the tape is generally more convenient, and is sufficiedtly accurate. The amount of muscular atrophy of both thigh and calf should also be recorded. The degree to which motion is possible in the antero-posterior direction may be ascertained in the same way as deformities are measured. The deformity having been measured and recorded, the presence or absence of involuntary muscular spasms, limiting the motion of the joint, should be tested. To make this test it is convenient to first test the leg of the sound side. The pelvis is steadied by one hand, placed over the spines of the ilium, while the other grasps the leg just below the flexed knee; flexion, abduction, adduction, and rotation are then tested. The affected limb is then tested in the same manner. In timid patients or very sensitive joints it may be as well to test rotation by rolling the leg from side to side as the patient lies upon the table, or the patient may sit with his legs dangling over the side of the table and the foot may be swung from side to side. The patient then is placed prone, and, if the degree of deformity will admit it, the leg is flexed on the thigh at a right angle, the ankle is grasped by one hand, the pelvis steadied by the other hand resting on the sacrum, rotation is tested by moving the foot from side to side, and also by lifting the whole limb from the table. The parts about the joint should be palpated for tenderness, induration and fluctuation. The presence and size of abscesses should be noted, the location of sinuses and their character, and the nature of the discharge. The advent of an abscess is usually first made by increased pain, muscular spasm and tendency to deformity. Tenderness may often be made out on palpation, and sooner or later, induration or a boggy feeling is manifest. This usually is first felt directly in front of the joint, although it may appear posterior to the greater trochanter, or in fact at any point in the neighbourhood. As the abscess increases in size it usually extends downward and may come to spontaneous opening within a few weeks, or not until after many months.

It does not appear to us that anything is to be gained, and often much may be lost, by early operative measures upon the abscess of hip disease, provided there are no constitutional symptoms of septic infection. An abscess opened early invariably conducts to carious bone, and generally to a joint extensively diseased. Rarely can all the tubercular material be removed without a complete excision of the upper portion of the femur and of the acetapulum. Unless all diseased tissues be removed, a sinus is likely to remain which may subject the patient to septic infection. An abscess left unopened for some months often descends a considerable distance and becomes cut off from the site of the original focus. In such a case careful operative measures without drainage should result in immediate closure and primary union, but it is not easy to tell when the abscess is no longer connected with diseased bone or joint, and the surgeon who interferes takes a very serious responsibility. He should not, in our opinion, open such an abscess unless he can be reasonably sure of removing all tubercular material, and of closing the wound without drainage. The use of a draining tube leads to the formation of a tuberculous sinus, which is exceedingly difficult to heal, far more difficult than a sinus resulting from spontaneous opening. When operative measures are undertaken we believe that the tubercular tissues, whether sac of

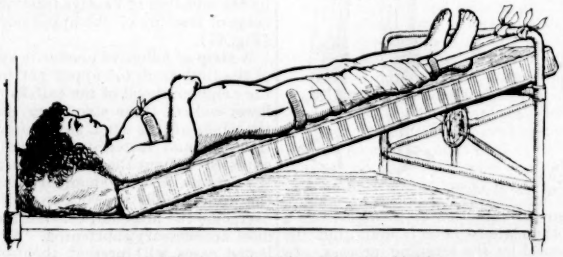

Fig. 47.—Fixation traction after excision of the hip joint.

abscess, wall of sinus, synovial membrane, cartilage, or bone, should be removed by cutting with a knife or chisel, instead of the scratching and scraping to which such tissues are usually subjected by the so-called sharp spoon. There can be no question

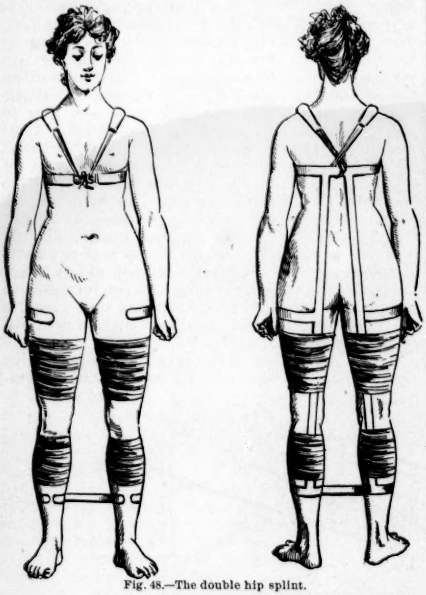

Fig. 48.—The double hip splint.

that the risk of general infection is greater from a cutting operation than where none is done, but the risk is much increased by the scraping process. In considering the treatment of these abscesses it should be remembered that a very considerable number of them, if left to themselves, the joint being put at complete rest, never go on to an opening, but gradually dry up and disappear without any apparant ill-effects to the health of the patient (Figs. 44, 45, 46).

If it were certain that every abscess would come ultimately to the surface, or if there were any reason for believing that the health of the patient suffered from allowing them to remain unopened, or from their being reabsorbed, operative measures would be justified in all cases; but as there is no way of knowing what is to be the course of any given abscess, we believe that the indications for operative interference should be made to depend upon the general health of the patient, and that no abscess should be opened unless the patient's health be unquestionably suffering from its presence. We would make the same rule regarding other operative procedures, such as the removal of the focus of disease within the bone, excision of the joint, and amputation. If any case in the recumbent posture should grow progressively worse under efficient immobilization of the joint and the best obtainable hygienic surroundings, operation for the removal of the disease would be indicated; but we have not seen such a case unless it had been allowed to go on to an exceedingly advanced stage without any treatment whatever. The preservation of the patient's life, then, we would make the only indication for an excision of the hip joint, or for an amputation. The operations for excision, or for amputation, need not be described here, since they are found in all works on general surgery; but if excision be performed, thorough mechanical treatment following the operation is indicated and should be the same as in the treatment of an unsound articulation. This after-treatment we think is often neglected by the general surgeon, and may account for some of the relapses which have been reported. The mechanical treatment of these cases, consisting of immobilization and protection to the joint, should be continued until every evidence of unsoundness has been absent for a very considerable time. The hip-splint, used after an excision, should be supplemented by the addition of fixative traction as is done in some cases of fracture of the upper portion of the femur (Fig. 47).

A strip of adhesive plaster is applied to each side of the limb from the upper portion of the thigh to the neighbourhood of the calf-band of the splint, the lower ends of these strips are then carried around the wings of this band, so as to secure the necessary traction, and fastened securely, and the splint is adjusted without the usual shoulder straps. While the patient, without shoulder straps, is lying in bed the splint tends to work downward sufficiently to overcome the muscular contracture which would produce unnecessary shortening. At times old and neglected cases will present themselves for treatment with a serious deformity, and the question as to whether any operative measures are demanded. If

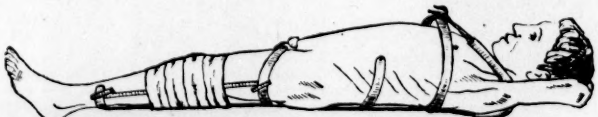

Fig. 49.—Side bar to correct or prevent knock-knee from spasm of the adductor muscles.

muscular spasm be evident on attempting motion at the joint even if there be no possible motion, or if an apparently sound joint possesses a certain degree of motion, the deformity can be corrected in a comparatively short time by the leverage action of the splint; or the deformity may be corrected at once, or nearly so, by anæsthetizing the patient and placing the limb in the best possible position. In these cases we do not recommend section of the tendons, fasciæ or other contracted tissues, although there may be no very serious risk in their division. To this subject however, we will return again. We think it safer to divide the femur with the chisel either through the neck or in the neighbourhood of the lesser trochanter than to attempt a fracture by manipu-

lation. The after-treatment of either of these operations is the same as indicated after an excision of the joint. The patient should remain in bed until union is sound, when the splint may be removed and he may remain in bed, an equal time, without immobilization, or in place of recumbency, in certain cases, the splint may be cut off at the knee and the patient allowed to go about with splint and crutches, without the patten, for a period equal to that which was required for the union of the bone.

Cases occasionaly appear with abscesses or sinues so placed that the pressure cannot be born from the main stem; it is then customary to immobilize by the double hip splint with a longer or shorter section of the main stem on the affected side removed. The double hip splint, which is used in all cases of hip

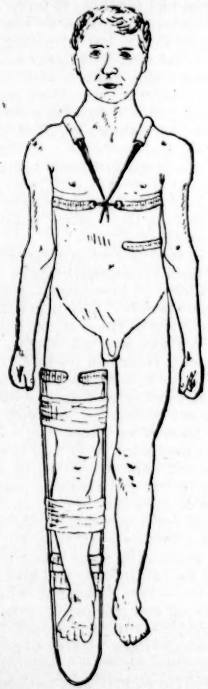

Fig. 50.—Attachment for knee joint disease in conjunction with hip disease.

(Fig. 48) disease affecting both joints at the same time, and in some cases of young children where the joint sensitiveness in single hip mischief is extreme, consists of the chest band already described, from which two main stems pass at a point opposite the lower angle of each scapula downward, posterior to each hip joint and down the back of each limb, and separate at the bottom by a distance from four to eight inches. The lower ends of the main stems are joined by a straight bar of iron, the inner wings of the thigh bands are usually omitted, and we generally add a lateral wing to each side. Upon this splint the patient can be moved from bed to a couch or to a carriage with very little inconvenience or pain. Cases of double hip disease are not so very infrequent, occurring perhaps in the ratio of one to one hundred of single hip disease. The disease rarely begins in both joints at the same time, and it occasionally develops in the second joint while the patient is lying recumbent and protected from all traumatism during treatment of the first joint. Under these circumstances it frequently occurs that the joint last attacked recovers first, though not invariably with the greatest amount of motion. Partial or complete anchylosis of both hip joints resulting from double disease is not so very serious if the lumbar spine be sound and flexible, and provived the limbs be in relatively normal position. Patients are able to walk and to climb stairs, to sit, and to perform most of the ordinary movements of life fairly well. The results of double hip disease, treated by the Thomas double hip splint, appear to be somewhat better than the results of disease in single joints. The nature of the affliction is such, that prolonged recumbency is necessitated, and walking is impossible before recovery has become practically complete.

In hospital practice and among the very poor and ignorant, it will often be found impossible to keep the patients in bed with single hip disease as long as we have inidcated to be desirable, and it will also be found impossible in all young children and in many older ones to compel the use of the high patten and crutches. Parents will permit these children to walk and bear their weight upon the diseased limb. As a matter of fact these cases do better than we might expect. We have observed many such, and find that some recover without flexion, rarely with adduction, and with very little, and sometimes no, shortening. The number that have partially stiff joints is greater than among those where treatment has been carried out in accordance with correct theories.

Now and again during the development of abscess a case will present so intense a degree of spasm of the adductor muscles that, if the patient remains fixed in the ordinary splint, knock-knee will result from adduction of the thigh, the lower portion of the leg being held by the lower part of the splint. This complication is prevented or corrected by passing a light bar of iron from the thigh band to the calf band, along the outer side of the leg, and bandaging the knee to this band as well as to the main stem (Fig. 49).

In cases where disease at the knee-joint appear at the same time with disease at the hip, the knee may be immobilized by joining the knee and hip-splint together, or by adding to the hip-splint a light band of iron passing down each side of the leg and around somewhat below the foot, and rivetted to both inner and outer wings of the thigh and calf bands (Fig. 50).

In cases of spondylitis of the lumbar region, occurring at the same time as the disease at the hip, the back may be protected by a stout sling of leather, passing from one main stem to the other of the double hip-splint, or the main stem with its thigh and calf bands may be attached to a spinal support.

ADDRESS ON DIETETICS.—MEDICAL FOOD ETHICS NOW AND TO COME.

Delivered before the Section of Physiology and Dietetics of the American Medical Association, at its Forty-third Annual Meeting held at Detroit, Mich., June, 1892.

BY EPHRAIM CUTTER, M.D., LL.D.,
OF NEW YORK CITY.
SECRETARY OF THE SECTION.

There is no doubt in my mind that most of the common diseases depend upon food for cause and cure save those from wounds, injuries, contagion and infection.

Foods are substances, organic and inorganic, which, taken into the human body become normally changed into the normal tissues of that body and which sustain normal life. On this definition, air is food, water is food, common salt is food, all belonging to the mineral kingdom. It is clear that life cannot exist without air food, for example; cut off all air food from the sick and you cut off the sick from their life and disease.

To put this more clearly take the Sections of this Association, in the order given by the Secretary in THE JOURNAL:

Obstetrics and Diseases of Women.—If I can judge from experience, difficult labors and gynecic diseases are largely due to bad feeding before and after labor; I know a case where a woman had four successive very difficult labors which were deemed so perilous that her physicians advised her not to have any more children for fear of death—yet this woman after being dieted had a fifth labor that was so easy that her child was born with only one pain and a half hour before any physician could reach her. I have known puerperal convulsions which is one outcome of fatty degeneration by feeding on carbo-hydrates in excess—to be cured by medication and nitrogenous food and two successive labors to be normal.[1]

Section of Surgery and Anatomy.—A great many of the physical lesions for which surgery is used come from bad feeding—among which are tumors, diseases of the eye, stricture of intestines, empyema, to name no more. If a body is otherwise healthy from good feeding such bodies respond the best to surgical means used for relief, especially in cases of wounds, contusions, fractures.[2]

State Medicine.—Read the discussion on Senator Paddocks' Pure Food and Drug Bill and the diplomatic reports of our ministers to France, Germany and Italy on the hog.

Ophthalmology.—Oculists have told me that a large part of the diseases of the eye came from bad feeding. Drs. B. W. Richardson and S. Weir Mitchell years ago showed the production of cataract in ten minutes time by the hypodermatic injection of one teaspoonful of a saturated watery solution of sugar under the skin of a guinea pig or a frog.

Laryngology and Otology.—One reason why I am now an advocate of food treatment of disease is that I found I could not cure throat cases satisfactorily unless I paid attention to the diet. Pharyngitis sicca for example thus becomes very curable. The delicate structure of the ears are much affected by bad feeding, which was seen when men were fed on oatmeal alone, being troubled with noises and later deafness.[3]

Diseases of Children.—It is notorious that one-half of all children die before five years of age and the greatest cause of this mortality is bad feeding. Cholera infantum is par excellence a food disease and my grand-children did not have it as they were fed on wheat, milk and meat.

Oral and Dental Surgery.—A dental friend once fed three youths, from ten to fifteen years on animal food and fresh air food in the woods of Maine; in three months the texture of their teeth was changed from chalky and friable to the firm normal fibrous texture of health—all which tends to show that decayed teeth come from bad feeding. I know a man about sixty years of age who expected to lose all his teeth before the age of thirty, but by giving his teeth better soluble mineral food he retains most of them in fairly good order; this was a case of consumption of the bowels in early youth. Feed man as well as dogs are fed and you will have as good teeth, but the teeth must have hard things to chew as Prof. E. A. Wood, of Pittsburg, has shown. In the London Zoological gardens a number of years ago some lion cubs were born with cleft palate which on investigation was found to be due to the fact that their mothers had not been fed on their usual supply of animal food during gestation.

Neurology and Medical Jurisprudence.—At a late medical meeting, alienists showed casts of defective jaws and teeth of aliens. I have seen a good many such in the mouths of people. I have met them in travelling (to say nothing of those encountered and examined in practice) who were not aliens. I think the bony defects came from bad feeding. Stunted trees are found to be due to sterile soils and high altitudes, *i.e.* from a limited supply of air and earth food. Unless the nervous system is well fed insanity and nervousness cannot be kept out. I think that divorce comes somewhat from bad feeding producing dyspepsia and nervousness which make constant quarrelling, conflicts and clashing more easy.

Of the urine of one hundred male aliens (asylumed) I found catarrh (protoplasmic) of the genital organs in 80 per cent.; this catarrh is a fruitful cause of neurasthenia amounting some times to insanity and it is produced by bad feeding and also cured by good feeding mainly. (This statement is based on more than ten years of recognition of this catarrh as a cause of neurasthenia in private practice). I know that doctors would have clearer heads if they fed their brains rightly, and their patients would have leveler heads if fed rightly and perhaps there would be fewer suits for mal-praxis.[4]

Dermatology and Syphilography.—I have seen diseases of the skin held in abeyance by good feeding and return with bad feeding. As to syphilis I believe it is a germ disease communicated by contact and is not wholly in this category—but good feeding goes a long way towards relieving and curing the terrible devastations of syphilis which occur in those who are poorly fed and weakened by drink. A case

[1] Food in Agalaxia, Amer. Jour. Obs., April 1878—Feeding nursing children, Va. Med. Mo., Aug. 1880.—Diet list for lactation. Mich. Med. News, Aug. 1880.—Milk and Motherhood. Annals of Hyg. Phil'a., March, 1889.—Puerperal convulsions, relations to feeding, N. E. Med. Mo., Feb. 1887.—Reversed peristalsis, Va. Med. Mo. April, 1888.—Food in motherhood. Book. David Stott, Pub., 370 Oxford street, W. London, Eng.

[2] Food as a medicine in uterine fibroids, Amer. Jour. of Obs., Oct. 1877.—Diet in cancer, Alb. Med. Annals, July-Aug. 1887.—Stricture of the colon, Alab. Med. and Surg. Age, March, 1889.—Food and uterine fibroids, Tenth Int. Med. Congress, 1890.—Fatty and fibroid degenerations, Jour. Amer. Med. Assoc., Feb. 1890.—London Lancet, vol. I. 1890.—Diet in tumor and cancer, Med. Bulletin, Aug. and Sept. 1891.

[3] Food and Throat affections, Jour. of Laryngology, London, Eng., May, 1890.

[4] Food, Nervousness and Divorce, Therapeutic Gazette, Aug. 1880. Male Neurasthenia. Va. Med. Mo., Feb. 1890.

of syphilis of ten years' duration, remarked that the periodic skin troubles he had could be kept down only by following the course of diet laid down for him and using his ointments; if the diet was not maintained as ordered, local applications were worthless.[5]

Materia Medica and Pharmacy.—As things now go the efforts of this Section in the food line are largely on manufactured dietetic preparations. One preparation of invalids' food has gone so far as to define a mechanical separation to be an extract. Indeed the medical profession has been and is now in the receipt of more instruction on food from this Section than any other.

Physiology and Dietetics.—This is a food division without any doubt.

Practice of Medicine.—Here is an abundant field for food in the handling of acute and chronic diseases —of the latter note consumption of the lungs and bowels, bronchitis, hay-fever, asthma, rheumatism and all affections of the alimentary tract, to name no more.

This brief statement shows how close the subject of food comes to our Association and leads us to discuss

MEDICAL FOOD ETHICS AT PRESENT.

Judging from the reluctance of physicians here and abroad to furnish papers for this Section it would seem as if the profession was in an apparently helpless condition as to food with the exception of pharmacists who so freely publish instructions as to foods and the treatment of disease by foods. Often it is the food they prepare that they recommend and offer as a clear guide to the perplexed physician out of his dilemma. The most positive directions for surest relief come from those who are not even pharmacists nor apothecaries and then if the words of these food vendors are to be relied on there is no need of any physician studying up the subject of alimentation nor hence any necessity for the Section of Physiology and Dietetics.

We should always be grateful for any useful information as to foods no matter whence it comes, but it does seem that the absence of any chairs in our medical colleges especially on the subject of foods is one cause of the present failure of food ethics.

Another trouble is the difficulty in carrying out any regime of food. Patients, cooks and almost all the laity are not willing to deny their appetites and had rather eat and die than eat to live. They will not give up what they like to eat on the principle that the French now lay down and Count Rumford laid down, that any agreeable food was nutritious. This difficulty in the army and navy is overcome by the discipline, and we have the privilege of hearing from these arms of our service where the men must eat what the surgeons direct, according to law.

Among the curiosities of medical food ethics are: 1. the fact that physicians have stood up for their rights to study foods, but a cold shoulder has been turned to them as a rule, their dicta disobeyed, while the dicta of unprofessional people, non-medical experts and pharmacists are received as law and gospel no matter if these dicta proved clinically to be untrue and fallacious, while curiously, some physicians recommend a food which chemically and morphologically has been shown to be common flour worth perhaps five cents per pound but which advertised as a food sells for one dollar a pound and set forth with steel engravings. Surely this attitude of medical men against their fellows and in favor of out-siders is very queer ethics.

COOKS USURP THE PLACE OF DOCTORS.

Menus are made by cooks who are nameless and know little of food save as to their preparation. Generally cooks are uneducated with some noble exceptions as Count Rumford and the present German Ambassador to France. It is a singular state of ethics that the medical profession are not called in to make out the menus for tables and banquets just as they do for the Army, Navy and Hospital Marine. Many a time has a physician's good work been upset by a Delmonico dinner eaten without any regard to its physiological, pathological, chemical, kinetic, potential or physical relations! To be sure the æsthetics of taste, smell, sight and touch are allowed by the cooks full sway as to food in these cases—but the point is that medical knowledge is not invoked so that the dinner will round out into its full proportions of efficiency in all directions of good health. If more medical supervision was exercised there would be much less bad cooking and less occasion for the remark that "God made good steaks but that Satan spoilt them in cooking!" It may be because cooking is considered a drudgery that the present state of medical ethics towards it exists. But after what has been said here as to the etiology of food diseases it certainly is a matter of the greatest importance for medical men to look out for the interests of their patients as to cooking. I have known one badly cooked beefsteak to restore the haze of albumen, casts and fatty epithelia to urine which had become clear after fourteen days of hard strict watching and care. I have no doubt physicians now get the reverse of praises because their good work has been undone by badly cooked food.[6]

FASHIONS IN FOOD.

While it is the fashion not to have any children, or having them in spite of fashion, LOT to *suckle*, of course artificial foods are in demand and normal lactation is at a discount, no matter what the medical profession teaches to the contrary. Just as women will environ themselves with strait jackets (corsets) no matter what doctors say and no matter if they fall dead as one did lately in New York at a ball, killed by tight lacing and probably the fatty degeneration that came from a languid and impeded circulation caused by tight lacing.

A debt of gratitude is due to those who prepare good food substitutes for such a deficiency caused by following the fashions. Some time ago some vendors of infant foods claimed that their wares were better for babes than the normal breast milk, but this claim is withdrawn now. (If mothers would live on a diet of two-thirds animal and one-third vegetable, they would have milk enough, as I have found from my personal experience).

There are some artificial foods which do not

[5] Morphology of syphilitic blood. Am. Jour Dental sciens, Oct. 1879. —Throat syphilis and tubercle according to Salisbury. Arch. of Laryng. N. Y., Dec. 1880.—Blood changes in syphilis treated by the McDade Fluid Extract Stillingia. Gaillard's Med. Jour. Feb. 1884.—Crypta syphilitica, Monographia syphilitica, Sept. 1888.

[6] Food as an æsthetic, chemic, physiologic, pathologic and therapeutic, Am. Jour. Med. Science, Jan. and Feb. 1880. Baked Beans, a serio-humorous medical paper, Alb. Med. Annal, Feb. 1887.

verify their claims, and all claim to be the best for monetary if not monopoly reasons. It is the fashion to reach every physician in the land with food advertisements; the more money made on the food the better the advertisements. The tone of these advertisements is humiliating to the medical profession, as they take it for granted that no one knows anything about these foods but those who write the advertisements. They even instruct almost every other department of medicine and assume a superiority of medical knowledge over those who it may be have studied medicine longer than the self-styled instructor has lived. One such in my own office, a lad of eighteen years assured me that sugar in large excess was of no harm in medicine. But I had learned that it would return albumen to the urine and yeast to the blood whence it had taken time and care to eliminate them by stopping off sugar and kindred hydro-carbons. There is this to be said: So long as the medical profession refuse to study the action of common foods on the body till thoroughly understood, just so long dietetics will be a terra incognita, and I do not see how any medical man can be blamed for doing what he can to enlighten the darkness of so important a subject and to wake up fashion to take a sensible view of food.

Once it was the fashion for women to wear thin soled shoes and many were supposed to get ill from this exposure, but now happily it is the fashion for women to wear thick soles; I heard a man say before the fashion changed that if women were weaker than men, they ought to wear thicker shoes than men. A sensible view to take, and shows sensible fashion.

Would that it might be the fashion for wives so to feed that lactation could be possible for two years. They do this better in Japan. The Japanese minister to this country in 1886, Hon. R. Kuki, told me that it was not rare to see Japanese children suckled to the age of ten years! Rameses II, the Pharoah of Moses time in an intaglio, is depicted as suckling the breast of the goddess, Isis. His figure is of a youth of seventeen years standing and sucking the left breast while the goddess with her right hand embraces him! Pharoah wished to show his descent from the gods—but as this symbolical picture at the age of seventeen months would have answered just as well as at seventeen years it seems as if it was the custom for the Egyptians to suckle children to the age of seventeen years. To us the intaglio seems impossible, but a patent nursing bottle and a child of seven months would come near the ideal of conventional suckling of to-day which too many doctors recommend.

AMERICA IS OR SHOULD NOT BE BEHIND IN COOKING.

It is often truly said that America has means of cooking to excel other countries: 1. As to things to cook, and 2, as to things to cook with.

1. Nature has lavished on America a splendid soil and cultivation, and Congress has appointed a department of Agriculture in the President's Cabinet to look after food production and these wise national provisions have already redounded to an abundance of food products not elsewhere seen. America is the granary of the world and its store-house of cattle. One feels proud of what has been done and all medical men should sustain the Agricultural bureau of our government. The subject of American food products has lately been a matter of great diplomatic discussion and legation management with the nations of Europe, and European people live better because of our agricultural harvests.

2. I often think that Count Rumford's heart would leap for joy if he could see the modern appliances for cooking used in America, and that he would be displeased with his successors for not awarding his prizes to manufacturers of all sorts of cooking implements such as are everywhere seen in America; the modern cooking stove for example is a marvel of fine iron casting and of a skillful application of the principles of heat. The oil stoves—the steam cooking apparatuses, the common closed baking pans where high steam is used, the bilateral cooking of beefsteak, the cooking by gas are very worthy of commendation. But with all these advantages it must be owned that there is too much bad cooking in our fair land. In place of good coffee, bad coffee is common, spoilt in the preparation; steaks are fried to become like leather, and so on through the list. I have labored so long in this field and with seemingly but little good result that I believe the ethics of bad cooking cannot be changed unless physicians organize and continue to work to promote a healthy public opinion as to this most important matter. The American Medical Association should endorse the sentiment that bad cooking results in physiological sin and is a crime against the very woof and warp of society, by cheating it of its inalienable rights, just as dear as those were that our Revolutionary fathers fought, bled and died to secure from King George III. How much use is it to have free citizens if they are condemned to eat badly cooked food which causes weakness, sickness and disease!

The ethics practiced towards Dr. Sylvester Graham who years ago advocated facts about wheat bread which are now accepted show the slow and conservative ways in which things are sometimes done. I remember as a boy how much he was talked against and persecuted. But now that all the actors have passed away it remains for some one to give him due credit and justice.

The physiological and pathological effects of food used exclusively and singly, on the blood, sputum, fæces, on the nervous system and the alimentary canal have not been studied by physicians enough on man; a few have done it well, but their reports are not received by the profession in general and are often scouted mostly on personal grounds which should not enter into scientific investigations. It is far better to simply repeat such work and see if it is correct, giving the phenomena free chance and scope; then if the facts are not sustained, controvert and condemn; but in this age words and arguments not based on facts are worthless. As one has truly said, the present age has a very strong magnifying glass and applies it too for the bringing out of truth, which stands all tests.

Ethics of food based on facts will stand the test of time and prove of lasting value. Hence it is our duty to change all *our* false ethics and act in accord with truth and justice and then shall we truly honor our profession and add new lustre and glory by its beneficent acts.

A Throat Specialist's Opinion.—Lately writing he says: "I do not know any food to cause or cure diseases of the throat." Now I know that oat-meal will cause sore throat, and a lay-man once told me he would not eat oat-meal because it made his throat sore. *I know also that some coughs depend mainly upon the irritation produced by gravelly deposits*

in the expectoration made up of crystalline matters such as are found in the urine and feces, the natural exits of these saline deposits. These deposits are caused by living on too much food from the vegetable kingdom so that the natural channels of elimination are not able to expel them. Asthmatic coughs come under this head. *Pharyngitis sicca* I have seen relieved at once by a liberal diet of hot water and animal food. To my mind such facts as these are sufficient reasons for connecting the cause and cure of throat affections with food. Perhaps my opinion in laryngology as to food is not authoritative; however, it is now thirty-four years since Alvan Clark made for me a laryngoscope and twenty-six years since I first did thyrotomy without tracheotomy for the removal of intra-laryngeal growths, and while my practice has not been limited to laryngology or gynecology, or the chest, or making diagnoses with the microscope, I have endeavored to do what might be called an all round work and thus my labor with the microscope and on foods has demonstrated to me clinically that intra-laryngeal growths are amenable to food treatment.[7] We forget often that nature is all the time trying to cure lesions in the throat (which never rests) as well as in other parts of the body, and if she has the right food to do it with she more often succeeds than when the bad food cause is kept going all the time.

The ethics of medical agnostics are sometimes amusing despite the serious consequences they often produce. A noted statesman lay seriously sick; eminent medical men examined him and finally after consultation told him he could live but a few hours; he asked them to leave him alone, but they replied, "You are dying and need us!" "Why do I need you if I am dying; leave me alone and let me die in peace;" the medical men went, the old man took a big pull of brandy and lived several years. It is no uncommon thing to see in the daily press notes of Blank's serious illness, that all hope had been given up by his physicians two or three of whom were constantly at his bedside. (It is no wonder a man does die when he has several doctors constantly attending him, presaging death.) But some of these cases live several days longer than the time allotted for them by their medical advisors and as in the case noted, sometimes they get well in spite of the doctors. These medical jackals are a drag on the profession; if one tries to enthuse hope in a seriously sick chronic case and with hard work, patient labor and much anxiety endeavors to start the patient toward health, such will do all they can to hurt and hinder; these are harsh words but they are true and need to be spoken in such an address as this.

"*Eat what she pleases.*"—"Doctor, what shall I give my girl to eat" was lately asked by a mother whose daughter aged 14 had a lesion of the spinal column and whose breakfast was made up of a cup of coffee and a little toast, and who immediately went off to attend school all day. The answer, "eat what she pleases." Now I suppose this is a typical answer and fitly represents the state of medical action, if not opinion, at the present time among a large class. It was honest no doubt as the physician believed what he said sincerely. But as one can be sincerely wrong or right, sincerity does not cover the ground of this action. Under the present medical ethics I do not see how the busy practitioner can come to any other decision. To be sure there are writings enough about food but there is a great lack of writings to show how foods do act on the system as verified by chemical, morphological, physiological, pathological, culinary qualitative and quantitative tests, on man as a race.

For example take *quantity*. Water hot or cold taken in moderate quantities as food is essential to human life. But put a tube down a man's throat and attach the outside end to a hogshead of water and turn the water on and the result would be disastrous. Quantity should be normal.

Quality.—Some mushrooms are edible; other mushrooms are inedible. The quality of beef makes the greatest difference. Quality should be good.

Cooking.—Bad cooking is notorious for its bad effects. Good cooking is celebrated for its good effects. It should be good.

Pathological tests.—Carbo-hydrates in excess will put yeast in the blood, albumen in the urine, cataract in the eyes, to name no more.

Physiological tests.—The diaphoresis, diuresis, peristalsis downwards, the thinning of the blood, the solution of salts by drinking hot water is an example. The tests should show normality.

Morphological tests.—These include the normal morphologies of blood, urine, sputum, fæces, skin, which vary to abnormal when improper food is eaten. These should be normal.

Chemical tests.—Albuminuria, glycosuria, oxaluria, etc., are removed by excluding certain foods and brought back by a resort to those foods again.

The standard of healthy secretions, I prefer, is found in a healthy babe suckling a healthy mother's breast.

These are the tests the writer approves of, and which he thinks the profession should employ in dietetics.

MEDICAL FOOD ETHICS TO COME.

These will be given by public opinion unless the profession does. People are finding out that medical men must care for the food question. Hon. Chauncey M. Depew, LL.D., the noted after dinner speaker on both hemispheres, the orator on great national and collegiate occasions has his popularity based on gracefully voicing public sentiments, and what he says reaches such a large number of people that his utterances may be taken for a fair index of popular thought on almost any subject he desires to discuss. He lately said that soon physicians will prescribe what people should eat at banquets and all other occasions. It will not be the first time that public opinion has compelled physicians to take up neglected departments of their art. The late Dr. Benjamin Cutter, my father, told me that in Massachusetts about one hundred years ago there were so many wives dying in child-birth under uneducated mid-wives that Governor Brooks and other men of influence, made a determined effort and compelled the physicians to become obstetricians with the result of lessening the mortality and changing the fashion from female to male obstetricians.

The air is full of the food question. All classes of people are interested in it, that is, if one can judge from observation and when the people rise to the height of compelling physicians to treat diseases by

[7] On the laryngoscope and rhinoscope, Boston Med. and Surg. Jour., 1861, 1866, 1867. Case of aphonia cured by extirpation of a neoplasm on the vocal cords by laryngotomy. Am. Jour. Med. Science, Oct, 1866. Sequel to a case of laryngotomy, thyrotomy. Arch. of Laryng. Oct. 1882. Laryngological contributions, Journal Am. Med. Assoc., 1889.

food and make medicines secondary matters, there will be not so much difficulty in getting papers for this section as there is now.

Experiments.—Experiments in feeding are going to be carried out on a large scale so that we shall know if the experiments that have been made are correct and on a broad basis, and if not correct to right them so that the physician shall know just what to prescribe. Such experiments will lead to *Chairs of instruction on foods in our medical colleges.*

Physicians (not pharmacists, who are not educated to be clinicians) are to be the teachers and authorities on foods. I do not attack pharmacists for the work they are doing on foods, but instead the idea that clinicians have neglected their duties in this line; I believe that possibly my letter published in THE JOURNAL Dec. 19, 1887, started the movement that resulted in the Section of Materia Medica and Pharmacy in our Association. I am truly a friend of pharmacists.

Possibly the need of physicians will be lessened, as lives will be lengthened and the sum of human weal increased, but the legitimate business will be work enough for scientific clinicians who will cure disease by preventing it, and such work will be better paid than now.

Character of the Food Work.—It will probably be national as the nation which is best fed will, other things being equal, be the one to conquer the others in war. Nations will evolute by good feeding and devolute by bad feeding. Beef has made Britain great in war. Diseases will be treated by prevention rather than by cure, by removing *prime* causes rather than by removing results of these causes or the secondary cause. The relation of germ diseases to food will be understood to depend mainly upon a weakening of the dynamic forces of the body systemic by bad feeding thus rendering it a prey to parasites. When medical men will be able and willing to do their duties as to food, so that their wards are in good health by avoiding the causes of ill health and sustaining the body systemic in a normal condition, the heights to which intellectual, moral, scientific and religious culture will go are simply beyond the conception of thought.

The Bible tells us that the fall of man came by eating forbidden things; the words health, hale, holiness, all come from the same root. I believe there is such a thing as physiological sin, and that if we had sound minds in sound bodies there would be less sin and crime than now. The late Dr. West of Princeton, Mass., suggested that the great use of tobacco might partly be explained by people living on flour deprived of its normal mineral constituents; hence the starved nerves "cry out" for more food and men stifle these persistent neurotic cries for proper food by narcotizing themselves with tobacco! I think it may be so, for I have heard of drunkenness being cured by eating beefsteak when the desire for drink came. In my opinion the present great prevalence of diseased nerves, eyes, ears, teeth, hair, bones, the asthenic type of disease—the decline of the normal increase of our native population, the prevalence of tuberculous diseases—to name no more—come from the too exclusive use of carbo-hydrates so popular in fashionable and unfashionable life—and that common flour is one great food at fault, because society demands that bread should be *white*, and hence impoverished of its phosphorous bearing gluten and mineral soluble salts.

CONCLUSIONS.

It has rarely been the fault of the medical profession to stand in the way of the best means of treating disease. Indeed, as public opinion governs all things, so is the profession held back from its legitimate work by a lazy public opinion, so a little earnest thought by the great mass of people on their relations to medical men would be of great assistance to us. I think medical men do not comprehend their real power in the community, and if on these food questions after thorough examination an opinion is given and concurred in by the profession, public opinion will wake up to the full importance of the subject.

All I ask now is that before condemning or endorsing the views here put forth, the honored and honorable members of our Christ-like profession will examine for themselves the truth. If they have not done so already, they should experiment on animals (themselves the best animals to employ) by living on single articles of food and study the blood, fæces and urine and see if the standard of perfect health is kept up. Those who will not do this on animals must keep silence when their opinions clash with the facts already given.

Dr. Sims, a late President of this Association, once told me to give details whenever I presented any subject—so I will try to follow his directions, *i. e.*

Medical Food Ethics to come in the Sections of the American Medical Association will, according to my best knowledge and belief be somewhat as follows, provided general experience coincides with the experience of some American physicians.

The Section of Obstetrics and Diseases of Women will use its influence to have food in motherhood beginning with the erection of the family altar and kept up till the children have outgrown the family home by feeding on a diet of two-thirds animal and one-third vegetable food,[8] and thus many difficult labors will be avoided, I think even those from contraction of the pelvis, convulsions from fatty degeneration, flooding from want of tonicity. There will be plenty of breast milk so that it will be unnecessary to use artificial foods. Children thus fed before and after birth will have good constitutions, other things being equal, which is a great thing to have in such a world as this.

As to *Diseases of Women.*—Should this Section adopt the views which the writer thinks are correct, to-wit—that a great deal of gynic disease can be best handled by prophylactic and post-phylactic feeding as a foundation, then will their ethics include a regulation of the diet of women even before their birth.

The writer knows of cases of uterine fibroids cured by diet. He believes that in cases of ante-flexion where the uterus has been kept in place by a topographically correct pessary, if a proper diet is enforced that the relaxed and stretched ligaments will by nature's own processes be restored to normal length. The stretched ligaments will become shorter and the shortened ligaments become longer; the vaginal muscular tissues will resume their normal tone and contraction, and with these results the uterus will stay in place (normal) after the artificial support has been withdrawn. He speaks from experience.

When a case of laparotomy is in good order from

[8] Food in Motherhood, London, D. Stott, Pub'r, 370 Oxford St.

feeding, the progress of the case is very satisfactory. An extra-mural fibroid was once removed from the fundus of the womb by one of the great American gynecists; the case had been under diet for its removal, but not satisfied with the slowness, the knife was resorted to, over fifteen years ago, with perfect success and the delight of all concerned.

The writer has reported a few of his cases of fibroids treated by food, and in a table appended here gives more case histories with those of patients sick with what was called cancer. It has been my experience and that of others to find in every case of cancer that came under our observation a history of great loss of nerve force from shame, poverty, grief, excessive worry, over hard work and improper feeding, and hence my definition given in 1887 of cancer being "tissue under mob law."

The Section of Surgery and Anatomy in my opinion will be decided in its utterances as to the food of their subjects. A late case is in point: A man was on diet for syphilis; in exposure in a boat off the Massachusetts coast, with hard rowing in rather cold weather, unused to work, he had a bone felon in the palm of his right hand, took cold in it and he went to a local surgical sanitarium in Boston. The writer, as the patient said, made quite a mental commotion in the institution by ordering porter-house steaks to be freely eaten; the orders were obeyed, and the attending surgeon said he had not seen a like case do so well.

Again, diet is better than surgery, sometimes, and if more largely practiced, would be many times. A case of empyema of long standing was brought to me, a man of about sixty-five years; he had been advised by the surgical staff of the Massachusetts General Hospital to have an ex-section of a part of a rib, though, with all due respect to their learned opinion, I never could see how removing a section of the rib was going to bring about a normal condition of the pleura. I told the patient that if he would live on beef and beef alone (N.B.—I never did and never do prescribe raw beef), I thought that nature would cure him. He followed the advice and was reported as cured in less than a year. It is said that prize-fighters after training, which includes dieting, sustain injuries in fights which look very serious, but which heal up with little or no trouble. When a subject of any surgical operation is filled up with gasses from fermenting food, or more or less undergoing a fatty degeneration from languid and impeded circulation from paralyzing foods, when he is half starved on improper food, depressed by food that is hard to digest, from bad quality, quantity or cooking, to name no more, he is less liable to make a good recovery than if he was in line with dietetic normality. This is on the principle of not wasting force on abnormal environments, and thus having it to use in the repair of the lesions left by the surgeon. Oftentimes surgical operations are upset by colds. Now, patients fed rightly are not apt to take cold, as the blood corpuscles are not huddled or stuck together, the fibrin filaments are of normal fineness, there are no skeins of fibrin, nor blood crystals, all which make active factors in the apparently simple process of taking cold; the blood driven from the surface of the body by the application of cold congests the weakest internal organ and stays there because of the abnormal physical features named above and which can be removed by good feeding. This is an age of germicides in surgery; now, there is nothing better to resist germs, than healthy tissues made so by good feeding. We are all of the time surrounded by the germs of disease which do not infest us if our health is good and normal. Depress that health, and the germs will be more apt to take root and grow. Peach blight is a result, not a cause.

Food relations to the Surgeon.—If dyspeptic clergymen will write dyspeptic sermons, then dyspeptic surgeons will be apt to do dyspeptic surgery. A surgeon needs a clear, level head, a keen eye, an educated touch, a strong heart, a velvet, but firm and steady hand, and withal an executive ability that is ready for emergencies and for the unexpected, which is sure to happen. But how can these requisites be had if he live on baked beans or other foods which are difficult to digest, cloud the mind and take away his nerve and verve? Nor do I think that surgeons who drink liquor or are soaked in tobacco, which some almost eat, can do the best work, for their hands will shake under fire.

Pathological Anatomy is built on bad feeding which is the strongest agent in the production of diseased structures.

Section of State Medicine.—The food ethics of this Section relate to the alimentation of the army, navy, marine hospital services and the people in general. It could well embrace the duties of our Section of Dietetics. It should have more to do with State and National laws about food. No matter what else is valuable in a State, healthy citizens are the articles of highest value. They cannot be healthy citizens without proper food.

The subject of diet for travellers is of State importance. Certainly if articles of food, like hogs and cattle for example, are matters of governmental care as shown by the Quarantine inspection for trichinosis, and the cattle pest, and the ethics of transportation, to name no more, the proper manner of serving up of these articles of food on the rail or boat, at stations or hotels even, are matters worth the solution of State Medicine. This position is one argument in favor of having a Secretary of Public Health in the President's Cabinet, an event greatly to be desired.

Section of Ophthalmology.—If it is true that sugar affects the eyes as aforesaid, certainly this Section has something to do with food. If it is true, as one ophthalmologist asserted, that nine-tenths of eye diseases were due to deficient or improper feeding, I think the position is correct. Inattention to the food question by this Section is an ignoring of the rational treatment of all diseases, to-wit—removing prime causes. The writer wishes this Section would heed these words and teach these specialists who cannot begin to meet the demand for their services caused by love of sweets in foods.

Section of Laryngology and Otology.—From what has been said above, this Section cannot afford to ignore food. Besides topical applications, such as iodoform, iron, nitrate of silver, etc., as Dr. Louis Elsberg used to say, act mainly by stirring up things in the hope that they would settle down in a normal condition, as the atmosphere does after a thunder storm. In other words, nature is the healer, and the more the recuperative powers of nature are, the more successfully will things settle down. In no way does nature get more force for the human body than from proper feeding. I have known laryngeal growths so voluminous as to cause aphonia, disappear without

any but nature's treatment. And as I have known large fibroids to disappear under diet, it seems fair to infer that in the constant laying down and taking up of body tissues, normal structures can replace throat growths when nature is fully supported by good feeding. I have known enlarged tonsils, flabby throats, pharyngitis sicca and catarrhs to disappear under diet. When coughs are caused by gravel in the sputum, gases in the alimentary tract from hard digesting foods, or foods in excess, from fibrous hypertrophies, to name no more, I know there is nothing like the food treatment to remove these prime causes.

(*To be concluded.*)

SOCIETY PROCEEDINGS.

The Medical Society of the County of New York.

Stated Meeting, Monday, January 23, 1893.

DR. CHAS. CARROLL LEE, PRESIDENT, IN THE CHAIR.

Dr. Simon Baruch read a paper on

PRACTICAL DATA ON THE APPLICATION OF WATER IN SOME INTRACTABLE DISEASES.

The recent revival of hydrotherapy is an interesting phase of therapeutics in this country. Three years ago the first paper, giving a general review of the uses of water external and internal, by lavage, irrigation, baths, etc., was read before this Society. Therefore the history of this subject is closely bound up with the history of this Society. Articles on this subject have now become numerous. A new journal has appeared on balneology, and a department in that magnificent specimen of American journalism, the *Annual of the Universal Medical Sciences*, chronicles the advances in this therapeutic specialty. Indeed, a recent letter from Dr. Winternitz, Professor of Hydrotherapy in the University of Vienna, refers to the fact that more is now done in this country for hydrotherapy than in Germany, its birthplace. For this reason I venture to offer some practical remarks on this subject.

The chief, though not the only aim of hydrotherapy, is to stimulate or give tone to the nerve centers. Since all vital energy emanates from the latter; since the proper performance of all the organic functions depends upon their activity, it is fair to deduce important therapeutic results from this agency, which influences it so potently. The main question is, does the application of water to the cutaneous surface stimulate the nerve centers? That this is a trite physiological fact, is daily observed in the effect of a dash of cold water in reviving a case of syncope. Here we have a brief shock to the sensory peripheral nerves, followed by reaction, whose effect is transmitted to the central nervous system and thence to the respiration, deepening it and the circulation, restoring the falling pulse; thus the temporarily dormant vital powers receive a stimulus whose appreciation must convince the most skeptical by its very simplicity. At this time I do not propose to dwell upon the various modifications which change in the temperature of the water applied to the cutaneous surfaces may produce, nor the remarkable difference of effect resulting from the increase of the pressure under which it strikes the skin, nor the valuable results of changes in the duration of the procedure.[1] Suffice it to say that we have in the external use of water a therapeutic agent so flexible that it may be adapted to the most varying types and forms of disease.

[1] See "The Uses of Water in Modern Medicine," by Simon Baruch, M.D. Detroit: Geo. S. Davis.

The followingg brief outlines of cases are presented in order to enable you to obtain a view of the practical application of hydrotherapy to some intractable chronic diseases, to demonstrate its flexibility and to point out the methods of adapting it to varying conditions.

Intense Chlorosis.—Miss H., æt. 20, ill two years; under constant treatment by gynecologists in Harrisburg, Baltimore and Philadelphia, was brought as a last resort to Dr. T. G. Thomas to be placed in his sanatorium. Dr. Thomas discovered no uterine trouble, and referred her on June 8, 1892, for hydriatic treatment, with a diagnosis of chlorosis of aggravated type. Local medical and institution treatment, iron, arsenic, diet and massage, and change of air had been tried in vain. Although the patient was plump, a more pallid creature could not be imagined. The slightest exertion produced difficult breathing and rapid heart action. Menstrual flow was regular, but scant and very pale. Blood examined by Fleischl's hæmometer registered 31 per cent.

June 10. Preparatory treatment by hot air baths and douches, to educate the patient's reactive capacity, was ordered. Fainting in the hot air bath, she was removed, a spray douche of two seconds at 64°, with 20 lbs. pressure, was rapidly passed over her, in a sitting posture. She again fainted. Friction produced no reaction.

On the following day a milder course was pursued. She was gently wrapped in a long-haired woolen blanket for forty-five minutes. Parts of the body were successively uncovered and splashed with water at 60°, thrown with some force from the hollow hand of the attendant. This was followed by friction, and continued until the whole body had received the ablution and friction. The same treatment was continued on the 11th and 12th, when she fainted twice. This was repeated without fainting until the 16th of June. She was again placed in a hot bath (167°) with a cold compress around the head, and given frequent sips of ice-water. The head not being subjected to the heat, the patient was enabled to breathe the cool air which permeated the room. When the cutaneous vessels became turgid she was seated in a tub containing eighteen inches of water at 100°, thoroughly rubbed for three minutes. This was followed by an ablution at 60°, good friction drying and general massage for fifteen minutes. She fainted twice during these procedures.

July 8. The last treatment had been continued, reducing temperature of the spray douche daily one degree; to-day she had an air bath (160° F.) followed by spray douche under 30 lbs. pressure for five seconds, beginning at 80° and rapidly reduced to 50°, followed by fifteen minutes' general massage. She reacted well and felt comfortable.

July 14. Same treatment has been continued. To-day she had a hot air bath (175°) followed by rain bath thirty seconds, at 94° reduced to 69°, then spray douche ten seconds 79° to 54°, and general massage. Reaction good.

July 30. This treatment has been continued until to-day she took a jet douche at 45° without flinching. Being absent in Long Branch, I wired Dr. S. T. Armstrong to examine her for me. Dr. A. reports: Miss H. looks quite well, eats and sleeps well, and is certainly improved since I last saw her. The comparison test indicates about 100 per cent. hæmoglobin.

August 1. Miss H. left for her home in Pennsylvania. This case certainly illustrates:

1. The effect of the douche in improving the nutrition.

2. That hæmatosis may be enhanced by the stimulus conveyed from the periphery to the nerve centers and thus reflected upon the blood-making functions (as has been well shown by Winternitz, Thermes and others).

3. That the most feebly reacting patient may by perse-

verance and proper adaptation of the hydriatic procedure, become accustomed to this treatment. The danger of shock from cold water is proven to be chimerical by this case.

If this fragile and sensitive young woman could be accustomed to the douche by beginning with mild procedures, no chronic case that is not *in extremis*, could fail to respond to it.

Nervous Dyspepsia—Anæmia.—Mrs. O., æt. 28, resident of Florida, consulted me May 5, 1892, for "catarrh of the stomach." Because of agonizing pains after meals, she has been living on mush and milk, and has had medical treatment for several years, with diminution but not disappearance of the pains.

She is emaciated, her voice is feeble; she is depressed and hopeless. Her wan face and prematurely old appearance bear evidence of a life of constant physical suffering. There is not the particle of the hysteric element in this case. Ordered at 12:30 P.M., a full test meal at Delmonico's, which she reluctantly accepted, because of dreaded increase of pain. Returning to my office at 5:30, the stomach was washed out without difficulty. To her surprise my prediction that her dinner would be digested was verified, a little tomato peeling being the only remnant visible.

The diagnosis of a gastric neurosis being thus confirmed, she was ordered a mixed diet, chiefly consisting of hot milk and stale bread and hominy for breakfast, adding eggs (soft boiled later) same with fish or oysters for luncheon, and steamed rice and roast beef for dinner. Dessert and salads forbidden. The general invigoration of the entire system being the chief therapeutic element in this case she was at once placed upon daily hydriatic measures as follows:

May 6. Hot air bath at 169° for six minutes filled the cutaneous vessels of her pallid skin and produced free perspiration. This was followed by a tub bath of water at 98°, for five minutes and a rain bath of 95° reduced to 90° for ½ minute at 20 lbs. pressure for the purpose of increasing cutaneous action. A tonic procedure by the spray douche at 90° for five seconds, with friction, closed the first treatment and resulted in good reaction.

On the following day she remained in a hot air bath at 164° only long enough to render the cutaneous vessels turgid to promote reaction from the rain bath for 30 seconds at 90° reduced to 80° and a spray douche at 70°. Reaction very fair.

May 11. Temperature of rain bath was reduced to 75°, and a jet douche at 65° was added. Reaction good.

May 23. Same treatment with jet douche to back at 60°.

May 25. Complained of sciatic pains on right side. The Scotch douche was applied to the gluteal region for 30 seconds followed by jet douche of one second at 59°.

May 31. On account of menstruation treatment had been omitted for six days. Sciatic pain is relieved. Treatment of May 11 resumed.

June 12. Temperature of rain bath reduced to 70°; patient has been steadily improving in flesh and spirits, being free from pain until to-day. The addition of cauliflower to her diet reproduced pains. Stomach was washed out and some mucus found in it.

Temperature of jet douche was raised to 60° as patient was excited by it.

June 19. Jet douche suspended; hot air bath 180° followed for 40 seconds by rain bath of 75° reduced to 65°. Stomach was washed out again.

June 20. Pain returning, the constant current 12 milliampères was applied by a large flat sponge electrode over epigastric and a small one over lumbar region.

June 27. Temperature of baths having been higher, were now reduced, patient being again depressed. The jet douche was given at 50° for 3 seconds. Reaction good.

July 9. Electricity having been unvailing and there being fermenting material found in the stomach, the Scotch douche has been applied to epigastric region for 30 seconds after the rain bath 70° to 45° daily, and followed by jet douche at 50° or 3 seconds. Patient now feels sufficiently restored to go to Buffalo to her parents.

Under date of November 26, 1892, she writes that she has gained fifteen pounds in weight and is much stronger, etc., has continued the diet prescribed, because, like most of these neurotics, she "feared her stomach was not equal to much of a change." Most of the time she is entirely free from pain, she has slight distress every now and then, but expresses the warmest gratitude for the help given.

This case is similar in many respects to the case of Dr. H. reported in "The Uses of Water" pg. 85 Vol. 1 and 8, demonstrating the value of hydrotherapy in improving the nutrition and thus furnishing better blood to the stomach nerves, which are calling for it through pain.

Diabetes and Obesity—Failure of Diet—Success of Hydrotherapy.—On March 7, 1892, I was consulted by Mrs. S., wife of a prominent police official, æt. 63. She had been suffering from lassitude, loss of appetite and depression of spirits for several months; had been relieved of muscular rheumatism by wet packs and massage a year ago.

Examination of urine reveal 6 per cent. sugar by fermentation test, spi. gr. 1040, quantity in 24 hours 81 ozs. She was languid and indisposed to exercise, weighing without clothing 252¼ lbs. on the 21st of March. An antidiabetic diet was ordered and systematic walking exercise. The former was rigidly adhered to for four weeks without effect, the latter could not be accomplished because walking two blocks "put her out of breath," and exhausted her. Acting upon the well known physiological fact that next to the liver the skeletal muscles hold most glucose, and that sugar is by exercise of these muscles best utilized for the benefit of the organism, I regard systematic exercise of quite as much importance as diet. I have the record of six cases in which these two combined entirely and permanently removed the sugar from the urine. A strict diet having failed in this case, it was important that some therapeutic method be adopted to enhance the patient's capacity for muscular exercise. It was determined to reduce her weight and invigorate the nervous system by a carefully regulated hot air bath until free perspiration ensued, once a week, followed by the spray douche at 90° for ½ minute, and at 80° for ten seconds, this succeeded by active massage. Five times a week she received a tonic hydriatic procedure beginning on the 28th of March with the dry pack for ½ hour to fill the cutaneous vessels, followed by a general ablution at 70° and good friction. Patient attended daily, coming from her home on West 152nd street in a carriage, as she was unable to walk.

On April 15, she had lost 61 lbs. and felt able to walk six blocks twice a day.

April 22. Urine showed spi. gr. 1035, sugar 5¼ per cent. Wet packs 45 minutes, sheet wrung out of water at 50°, followed by hot air bath 10 minutes at 85°. Sponge ablution on back at 70° with active friction in tub—massage 15 minutes. The object of this treatment was to increase tissue change and improve the circulation in the muscular tissues. This was continued until the 6th of June, the jet douche at 75° being added as a tonic and for contracting the muscles. The result of these procedures was ability to walk more every day until she was not fatigued by four miles per diem. The diet being rigidly adhered to, a rapid decrease of sugar was evident every week from the date of the first half mile walk.

Since July 1, she has been entirely free from sugar until the present time; frequent analyses having been made until the 1st of December, 1892. In this case the diet alone

pursued for five weeks made no impression, but as soon as the patient was able to oxidize her sugar by means of muscular exercise, improvement became pronounced. No medicinal agent could have accomplished this change in the nervous, muscular and vascular structures in so brief a time, if at all. Of this I am convinced by other cases similarly treated.

Diabetes uninfluenced by Diet and Hydrotherapy.—Mrs. Dr. B., æt. 65, applied for treatment for a severe herpes zoster on the left part of the back below the scapula. On the evening of April 4, 1890, I was hastily summoned, after I had treated her for herpes on the preceding afternoon. She was absolutely comatose without any reflexes, etc. Drawing some urine by catheter I found no albumen, but decided evidence of sugar, this being its first discovery. Towards morning she became conscious spontaneously and began to improve. On the following evening she was seen in consultation by Dr. A. J. Loomis. She continued under the treatment, chiefly dietetic and codeia and constant current for severe neuralgic pains at former seat of herpes. Sugar has been almost constantly present in small quantities one-half to one per cent. During the winter of 1892–93 she decided to take a thorough course of hydrotherapy, encouraged by the patient whose history is given above and who lives near her. The same treatment had not the slightest effect on the urinary sugar. But she regarded herself to be so much invigorated and capacitated for work and exercise, that she voluntarily takes the treatment twice a week as a tonic agent.

Sexual Hypochondriasis.—Failure of Hydrotherapy.—M., æt. 47, was referred on June 5, 1892, to the Institute by Dr. J. Weir Mitchell, of Philadelphia, with the following history (here abbreviated): Patient complains of impotence and a sensation of water trickling down front of thighs. Habits good, had three children all dead; two died at birth. Three years ago when his wife was absent he first discovered the trickling sensation. On her return he found sexual desire present but was incapable. Emission occurred and still occurs in sleep. Had two strictures cut without relief. After being in the mountains a year ago he had two successful connections and again in November, 1891; more frequent emissions and firmer erections during sleep. These are rare now. Present state—stout man abdominal pannus; uro-genitals, cremaster reflex absent; paræsthesia along anterior crural nerve; electrical examination negative; sleeps well; appetite good, no sperm in urine.

Dr. De Schweinitz pronounces eyes normal. Dr. Mitchell regarded patient as suffering from some slight, but distinct trouble of the lumbar or dorso lumbar cord, dread of sexual failure is probably emotional; full recovery of power is probably not to be looked for. Advises electricity (detailed) also douches alternating warm and spinal column.

Treatment at Institute June 5.—The patient's peripheral circulation being feeble, skin flabby and inelastic, pulse compressible and a general aspect of mental and physical depression being present it was thought advisable to give him tonic treatment as follows: A hot air bath (170°) for twelve minutes having warmed him up, a rain bath of 100° reduced to 80° during 45 seconds was given under 30 pounds pressure. General massage was given for fifteen minutes. Reaction was poor.

June 6.—Hot air bath (178°) 10 minutes; rain bath 95° reduced to 70° during one minute, was followed by Scotch douche (alternating hot and cold stream) to spine. Reaction poor.

June 11.—Same treatment was continued reducing temperature of douche daily one or two degrees and increasing pressure. Reaction is now good and patient looks brighter. The perineal douche (jet) of 60° for one minute is now added for psychic effect.

June 12.—Patient dissatisfied, does not think he can improve by having a little cold water sprinkled on him and insists upon more active measures.

June 16.—The psychrophore of Winternitz (a small rubber or skin bladder secured to a double current straight rectal tube attached to an irrigator) is applied for five minutes with water flowing at 45°.

June 19.—Patient looks brighter, but insists that, without any test, his sexual power has not improved. He leaves for Chicago to-morrow and tells me that without my knowledge he had been under local treatment by Dr. E. L. Keys while he was under my care.

The other two cases of sexual hypochondriasis, of a milder form and in younger men, were successfully overcome by the treatment here outlined.

Sexual Neurasthenia.—Recovery under Hydrotherapy.—In a man aged 25, the tonic treatment by hot air baths followed by rain baths and jet douche to spine, gradually lowered to 45° was positively efficient in establishing a satisfactory condition, This gentleman applied for treatment for general debility. He was not a sexual hypochondriac, because he incidentally mentioned that he had been married six weeks, and did not experience the feelings that he had anticipated from sexual congress, to which he had been an entire stranger before marriage.

After two months treatment he volunteered the statement that he was entirely satisfied with the results.

Angina Pectoris.—Mr. D., aged 40, of robust appearance gives a history on the 24th of September, 1892, of having suffered for several months from agonizing pain in the præcordial region whenever he attempted to exercise much. He was disabled from business and much depressed, all functions normal. Dr. Kenne, his attendant, called Dr. Janeway as consultant; diagnosed angina pectoris. Another consultant diagnosed aneurism of the aorta, advising rest and the usual treatment. Mr. D. presented a decidedly gouty diathesis, urine loaded with uric acid, etc. He was put upon a non-meat diet, and a daily wet pack for one hour, and a continuous wet compress around left side of chest; gave glonoin and strychnia; after three months treatment, during which pain diminished in frequency and intensity, he was allowed to take a trip to Chicago. On his return he was placed upon a diet of chopped beef, preceded by hot water, for breakfast and dinner; oysters and hot milk for lunch. Compresses have been discontinued. Wet packs daily, sheet wrung out of water at 50° and followed by an affusion with water at 70°. He always sleeps soundly during the packs.

January 1.—Reports himself entirely free from pain although he has done more work than ever in his life, and passed through the excitement of seeing his factory burned down and reconstructing it.

The soothing effect of the wet pack and its effect in promoting tissue change are well exemplified in this case.

Incipient Phthisis.—Mr. S., from Kentucky, æt. 26, merchant, consulted me at Long Branch on July 29, 1892. Looks pale, emaciated, states that he has been losing flesh and coughing seven months, is constipated, has no appetite. Caught cold during a fire. No hereditary element. Temperature 101°, pulse 120. Physical signs, percussion dull over left supraclavicular space, respiratory murmur in left apex harsh, respiration prolonged. Ordered calomel, 6 grs., and absolute rest. July 31, feels better. Temp. 99°. Ordered to go to the Hydriatic Institute for treatment. Here he was weighed (nude), 106½ lbs., and received a hot air bath until warm, to enhance his reactive powers; this was followed by a rain bath of 95° reduced gradually to 80° for forty seconds

under 10 lbs. pressure, gradually increased; then spray douche at 15 lbs. pressure, gradually increased to 30 lbs. for four seconds, at 70°. This was repeated daily. He reported again at Long Branch ten days later looking better, appetite improved and with a gain of 1½ lb. He says a friend advised him to have his sputum examined, the latter was found to contain bacilli. He was urged by his friend to see Dr. E. G. Janeway, who after prolonged examination pronounced him phthisical, and advised him to leave the city at once and ordered creosote. As he was improving under hydrotherapy and disliked to leave, I regarded his departure with disfavor and advised continuance.

September 8. The hot air bath, followed by rain bath 80° to 70° and spray douche 70° to 40°, have been continued; until to-day patient weighs 114 lbs., a gain of 7½ lbs. in five weeks, appetite is excellent, cough still troublesome; is very hoarse, temp. 101°. Benzin inhalation and ¼ gr. codeia every four hours improved cough in two days, during which the hydriatic treatment had been discontinued. It was now resumed.

September 12. Temp. is 90°, cough reduced to a minimum, appetite excellent. Weight 113½ lbs. Has been taking 6 drops creosote t. i. d., which sickens him and is discontinued. Ordered maltine with peptones t. i. d. in milk.

September 17. Hot air bath (170°) three minutes, rain bath 80° reduced to 60°, from which he reacted well. Cough troublesome. A spirometer test shows 190° before and 260° after treatment, which is 20° above the average for his height.

September 20. Dr. J. S. Ely reports tubercle bacilli in small numbers.

December 30. With occasional interruptions and loss of weight, patient has progressed well, and to-day weighs 121½ lbs., looks well, coughs but little, no temperature, and is anxious to go home. Dr. Freudenthal, who treats his throat, writes January 12, 1893, after detailing from his case records the physical signs he found on July 27 and again on November 11, 1892: "Patient looks and feels much better and has gained 10 lbs. in weight. Ulceration of the ligamentum glosso-epiglotticum and of the vocal cords, which have healed under lactic acid and menthol oil (20 per cent.).

"Although I am not as optimistic as you are regarding water treatment, I must acknowledge, that the improvement in this case is remarkable!"

January 21, 1893. Patient is to-day almost free from cough, has good appetite and digestion, weighs 123½ lbs. (a gain of 16 lbs.), and five lbs. in excess of his average weight in health. Dr. Van Gresen reports that no tubercle bacilli could be found after examination of seven slides.

REMARKS.—There having been no change made in the patient's diet, mode of life and treatment, this case is a clear illustration of the utility of judicious hydrotherapy in improving nutrition in cases that usually thwart us. Clinical evidence of its value in phthisis is accumulating so rapidly that I need only refer here to a few of the cases I reported to the State Medical Society last February. One of these, æt. 33, of one and one-half year's duration, beginning with pulmonary hæmorrhage, gained 26 lbs. in three months, and coughed so little that no specimen of sputum could be furnished; another 36 years old, ill two and one-half years, beginning with hæmorrhages, gained 21 lbs. and lost all bacilli from sputum, and returned to work; another æt. 31, ill one year with repeated hæmorrhages, night sweats, etc., who was discharged after one year's treatment with 20 lbs. gain in weight, without bacilli, and slight physical signs, and able to go to work (Transactions New York State Medical Society, 1892, p. 382). Such stubborn facts should make us pause ere we condemn these sufferers to exile from home. A more methodical management, as indicated in the above quoted, offers a reasonable prospect of success for *home* treatment. Witness the case of H. B. (p. 383), who after emigrating to Minnesota and improving there for six years, came to this city with a cavity and the most desperate general condition, and was sent home so much improved that he is able to attend to business.

Clinical proof abounds that phthisis offers, next to nervous diseases, the most fruitful field for hydrotherapy.

Advanced Bright's Disease with Albuminuric Retinitis. Remarkable Results from the Hot Blanket Pack.—Mr. J., æt. 60, a foreman at a lead trap factory, came under my care by request of his benevolent employer, on the 4th day of May, 1891. I had attended him several years ago for lead colic and severe headaches, from which he recovered. I now found pronounced swelling of feet and ankles, breathlessness on exertion, morning nausea, headache, double vision and vertigo; urine showed a large proportion of albumin, abundance of hyralic casts, sp. grav. 1020.

Patient received 10 grains of calomel, was put on bitartrate potas-lemonade, and was ordered one minim of 1 per cent. solution glonoin every three hours until flushed. He also received hot blanket packs of one hour, morning and evening. The quantity of urine having been reduced to 22 ozs., this treatment continued active until May 28. Dr. Edward S. Peck examined his vision to-day, and diagnosed homonymous diplopia, amblyopia and albuminuric retinitis. Dr. Peck examined urine on the 29th, and found it to "contain albumin in large reduction." There being some improvement in the symptoms, the same medicinal and dietetic treatment was continued. The hot blanket packs were given once a day, by means of a blanket thoroughly wrung out of hot water, laid upon another blanket; patient was snugly tucked into the hot blanket and afterwards covered by other blankets. He remained in this one hour or more, until he perspired very freely—successive parts of the body were now gradually uncovered and thoroughly dried. General friction closed the procedure.

June 30.—Examination of urine made from time to time revealed gradual improvement, in quantity and constituents. He went to the country on the first of July, 1891. On the 9th of September he called at my office. His urine presented but a trace of albumin, he was free from all unpleasant symptoms, was strong and had resumed his duties at the factory for the past week.

October 4, 1891.—I could find no trace of albumin nor casts in his urine. He worked without interruption during the entire winter, until August, 1892, when he was obliged to discontinue by a severe diarrhœa, for which I was not called. He went to Hackensack, N. J., and was there attacked on the 16th day of August by apoplexy and hæmiplegia, from which he died, after remaining unconscious six days.

Dr. St. John, his attendant, states that prior to this illness he had examined the urine, finding no casts and but a small per cent. of albumin. There was no odema. This case illustrates the value of the hot pack in restoring the failing function of the kidneys. It is to be regretted that the patient did not remain under observation. These points however, cannot be disputed; that he was utterly disabled by pronounced uræmia and albuminuric retinitis. He recovered from these so as to work steadily for a whole year. His work demanded precision and good sight, both of which he possessed during this period.

Dr. William McLaury, who attended other members of the family saw him during and after the illness.

Cases like this should give us confidence in the value of hydrotherapy in milder cases of Bright's disease.

In the Montefiore Home such cases are not infrequent. In the report for 1891, Drs. Ettinger and Rosenthal says:

"Two cases of chronic Bright's disease owe marked improvement to the systematic application of hydrotherapy." Both had been treated for several months elsewhere, without benefit. Both suffered from extensive dropsy of abdomen and legs. Eight quarts of fluid were removed from one of these on the day of admission and the other had been repeatedly tapped. The dropsy has progressively disappeared, until now it is entirely gone in both cases."

Subacute Nephritis.—Intense Catarrhal Jaundice.—Mrs. S. consulted me on June 29, 1892, being pregnant eight months. Albumin and granular casts in urine indicated nephritis of pregnancy. Two days later she was attacked by convulsions, during which she was delivered of a child which has continued to thrive. She remained comatose twenty-four hours, the urine being reduced to six ounces. Calomel, hot blanket packs and nitroglycerin "unlocked" the kidneys. The urine remained albuminous and scant for several weeks. Her recovery has been slow but steady under a non-meat diet, digitalis, nitroglycerin, etc. Urine was still albuminous when I was compelled to leave her on the 5th of September. She was now kindly cared for by Dr. A. H. Smith, who sent her to me on the 26th of September with the following (here abbreviated) history. "For some time after you left Mrs. S. did very well. The urine was abundant and the amount of albumin very small. I allowed her meat once a day. Appetite improved and kidneys remained satisfactory until her menstrual period, when there was an abrupt fall in the amount of the secretion to 30 ounces or less with increase of albumin to 5 or 6 per cent. I then put her back on digitalis and added potas acetate. This failed to increase the urine and the hands and feet became a little swollen. I then ordered nitroglycerin and in twenty-four hours, the amount was doubled. The specific gravity kept about 1015 to 1020. Diet, mostly milk. About a week ago, when the quantity of urine was smaller, she developed an intense itching of the surface without any eruption. Increase of urine was not followed by improvement in this respect.

It appears to me to be a case well adapted for hydrotherapy and I am glad she is under your observation for this reason especially. The itching is very distressing.

Bicarbonate soda has little effect. Hyosciamin gave her sleep. I sincerely hope you will be able to do something for her relief, etc." Having returned to the city on the 27th of September, I found Mrs. S. in a most distressing condition from constant itching of the entire surface; her eyes and skin had a yellowish tinge, bowels constipated, stools clay colored; no appetite; urine 30 to 36 ounces daily by careful measurement and decidedly albuminous. All sorts of local applications failed except a warm bran bath, the success of which was temporary. She was now ordered a daily wet pack for three quarters of an hour, sheet wrung out of water at 70°, reduced daily two degrees, followed by rapid ablution with water at 60°, reduced daily one degree; also an enena of 1½ quarts of water every day at 80°, reduced daily five degrees until 60° was reached; Carlsbad salts twice a week; and a non-meat diet. She passed twelve ounces of urine during the first four hours after the first pack. It continued to increase daily until the quantity is reached far beyond the normal. This treatment was continued until November 1. The last albuminous urine (a trace) is reported for October 11, at which time a few granular casts were still present.

Dec. 27.—Since that time eight specimens have been examined, all of which are entirely free from abnormal elements. Patient has gradually improved, with the exception of three days of intense colic, which I attributed to gall stones. These were carefully searched for and found on November 26, since which time the pain ceased, the skin cleared up entirely. For two weeks she had hot air baths, followed by the rain bath at 95°, reduced to 80° for twenty seconds, and the jet douche at 70° for two seconds, with massage. This tonic procedure improved her appetite. She is now taking two ounces olive oil twice a day in sarsaparilla syrup; and is allowed white meat three times a week, and beef once a week. In this case the action of the wet pack as a stimulant to cutaneous action, which relieves the kidneys of work was potent. Kussmaul, Fredrich Hoffman and others have pointed out the superiority of the cold pack over the hot in subacute cases of nephritis. Krull's injections have so frequently proven themselves the most efficient remedial agents in catarrhal jaundice, that the value of this hydriatic procedure need not here to be dwelt upon. Dr. Smith's prediction that this case required hydrotherapy proved correct.

Jan. 15.—Patient has been discharged several weeks with an allowance of meat every other day. She is perfectly well. Urine examined to-day is found normal.

Hystero—Epilepsy.—July 19, 1892.—A. F., æt. 15, was brought to the Hydriatic Institute by his father, who says on the 31st of March, 1892, on the day of his daughter's burial, the boy fainted. Ten days later he fainted in school, and again two days later. Dr. S. P. Cahen was called and investigated the case at school, coming to the conclusion that it was "a form of epilepsy." The boy was kept from school and put on bromide potassium. The attacks becoming more frequent, Dr. Geo. W. Jacoby was called in consultation; the same treatment was continued. He continued to have attacks every day lasting from five to ten minutes. At first he lay unconscious, without any movement whatever, then the attacks became violent, frequently requiring several men to hold him down and prevent him from doing himself bodily harm. Dr. Jacoby was again called in consultation and made an unfavorable prognosis. Several physicians who had been called during during the attacks, gave him hypodermics of morphine. Patient has also received electrical treatment from Dr. Cahen. Status presens—Face covered with acne, eyes restless, hand tremulous, gait unsteady, appetite fair but capricious, gastric oppression after meals, bowels constipated. Patient appears to be brominized.

Treatment.—Resorcin 3 grs. in ½ pint hot water an hour before lunch and dinner. He was ordered to be at once well scrubbed with soap and water. This was followed by a wet pack, sheet wrung out of water at 70° reduced daily two degrees. This to be followed by a rain bath at 90°—25 lbs. pressure gradually reduced during 30 seconds 75°.

Aug. 20th. This treatment had been used daily, the temperature of the bath being reduced two degrees every day. He had a slight attack five days after treatment was begun, none since. He was ordered to Long Branch to take surf baths.

Sept. 29. Patient has called on me several times reporting steady improvement. He was discharged cured. Up to this writing Jan. 1, 1893, no further attacks have appeared. Besides these, there were a number of cases of chronic rheumatism, neurasthenia, bronchitis, asthma and sciatica sent to the institute, for treatment by Drs. Starr, Dana, Geo. Jacoby, Sachs, Lezynsky, Walton, Feschner, Pritchard, Willy Meyer, Allen, Schoeney, Lincoln, Offenbach, Sayre and others, the results of which will doubtless be reported by some of these gentlemen. If the few clinical histories here offered will induce practitioners to utilize water more frequently as one of their remedies, I will be content.

Discussion.

Dr. Mary Putnam Jacobi: One can hardly do better than to repeat what Dr. Baruch has said in almost the words

employed by him, that in water by means of the various forms of its application we have a type of almost every other possible therapeutic measure, and only one remark should be added to mitigate the fanaticisms of certain treatment does not go far enough to meet all the indications. I have followed with the greatest interest Dr. uneducated water enthusiasts, namely, that the water Baruch's various contributions to the subject of hydrotherapeutics, and have been exceedingly delighted to see that the subject has begun to be taken up seriously in New York City where, I think, until Dr. Baruch began to study and investigate it it, had been much neglected. It is curious that German physicians who think water is good for serious and intractable diseases should regard it as dangerous in ordinary hygiene. That seems to be a notion prevalent among the German population of this city, and also in Germany. I would cite the remark of Uffeeman recommending with caution that children should have the face and neck washed every day, while the possibility of washing the child's whole body every day seems never to have occurred to him. In another treatise by a German author it is said to be exceedingly good to have a course of cold water treatment a few weeks, but to be continued permanently it is altogether too exciting to the nervous system. And this superstition that the cold bath is too exciting to be tolerated and that it is something which people can only gird themselves up to with great energy and strength of will is very frequently encountered among the laity and many physicians. I remember having rather an acrimonious controversy with a doctor because I had advised the cold water douche for a lady patient. She was a typical neurasthenic. He had once had the same trouble, he said, and had suffered such tortures from the cold douche that he should never be cruel enough to ask that a delicate girl be subjected to it. I think Dr. Baruch must have had great influence over the young lady whose case he has just related to induce her to continue the treatment after she had fainted under it on several occasions. My own observation has been that if patients feel at all tired after they have undergone one seance with the water treatment they consider that they have entirely gone to pieces, and will not discuss the matter further lest they be persuaded to continue it. It seems that where persons feel so badly after beginning the cold water treatment it is because the vaso-motor system of nerves have been exceeded out of proportion to the excitation which should be conveyed to the spinal nerve centres. It is an elementary truth to which Dr. Baruch has referred that the characteristic result of the application of cold water to the skin is a very great stimulus to the nerve centres and dilatation of the cutaneous vessels, but in some instances, instead of there being excitation of the centres in the cerebro-spinal system of nerves, the excitation is expended upon the vaso-motor system, producing contraction of the blood vessels and diminished blood supply as a tertiary rather than as a secondary effect, so that the subject remains cold or chilly and the surface pale. There is also apparently contraction of the blood vessels of the brain which may account for the intensely wretched feeling from which the person suffers. It is evidently entirely improper, as Dr. Baruch has pointed out, to begin the treatment in such cases by applying cold to the surface. One must begin with heat. I suppose when the blood vessels on the surface are mechanically dilated by heat that there is such a degree of stimulus of the cerebro-spinal nerves they are not exhausted by the subsequent application of cold.

It seems to me the value of hot water in the treatment of Bright's disease is due to lowering the blood tension by dilatation of the blood-vessels on the surface of the skin. I cannot see that it acts directly to make the kidneys better, but that by lowering the blood tension it overcomes one of the elements of the disease.

I would ask Dr. Baruch his opinion of an assertion by Dr. Weber, of London, that persons who have commencing uric acid deposits should not be subjected to the use of cold water, Dr. Weber advising only hot water. Would Dr. Baruch regard this simply as a fancy?

Dr. Frederick Peterson:—Although I came in too late to hear the paper read, yet being acquainted with the views of the author, I am sure I should coincide with most of his statements. I am particularly in favor of hydrotherapy in nervous and mental diseases. I think there are many conditions of mental disorder in which hydrotherapy is of great value. In incipient melancholia we have no other agent quite as efficient as prolonged warm baths. In motor excitation of acute mania there is, I think, no agent quite as useful as the hot wet pack. I have found by experience that it is much better than the strait-jacket and injections of hyoscyamia. In a conversation with Professor Winternitz (winter?), of Vienna, who has had much experience with hydrotherapy in chronic diseases, he told me that fully two-thirds of his cases are of nervous diseases; that he found this agent successful in many diseases considered incurable. Not that it cured them, but that it alleviated many of the symptoms. Hydrotherapy should be much more used. It is valuable in chorea, epilepsy, and many spinal disorders.

Dr. A. D. Rockwell:—It would be a good thing if some one would enumerate all the drugs which have come into vogue, had their day, and then were abandoned. It would show that much useless drugging has been going on, and the superiority of rational methods. As to therapeutic methods other than medication, we cannot but be struck by their permanency. Hot and cold water, exercise, etc., have been known since the beginning of medicine, and the more we know of them the better do we appreciate them. I quite agree with Dr. Peterson as to the great value of water in nervous conditions. I would like to refer to a special use of water, a mechanical use it is true, but yet one of great value, namely: intestinal irrigation. We all know the vast misery from chronic constipation, whatever it may arise from, and we know how much the person is improved by having the bowel flushed. It does seem unphysiological to throw such large quantities of water into the rectum; it does interfere with peristaltic action, and many who have commenced it have had to give it up. To prevent the occurrence of paralysis of the bowel I have found nothing better than electricity applied by the bipolar method.

Dr. Charles C. Ransom:—I can confirm what Dr. Baruch has already said by my experience at Richfield Springs, where I have occasion to use water in many cases during the summer. I can speak particularly of its value in nervous conditions. The few nervous cases which I have seen there have been mostly of neurasthenia in business men worn out by close attention to their affairs. In them I have used the cold douche with the most excellent effect. It relieves their insomnia, increases the nerve tone, and aids digestion.

Dr. Baruch:—My object in reading the paper was to give practical details and demonstrations, showing that water can be applied to the most delicate subjects. I have seen this demonstrated very often at the Montefiore Home, where a condition of admission is the incurability of the disease. In most desperate cases there, we find patients who never took a bath before gradually becoming accustomed to taking it at a temperature of 65° F. every day.

I would impress the impropriety of using the term cold water or warm water. We do not tell patients to take quinine; we give them the dose, and special directions should be given as to the temperature at which a bath

should be taken, the necessity for securing reaction, etc.

Referring to Dr. Jacobi's question, I may say that no person is better able to judge than she of the influence of water upon tissue metamorphosis, about which she wrote the best article in the English language as long as ten years ago.

I have endeavored to show that the judicious application of water is an agreeable remedial measure, free from shock or other unpleasantness, and produces striking results in some intractable diseases. In my propaganda for hydrotherapy I have in some quarters been charged with unwarranted enthusiasm. If a conscientious proving of all remedial agents in vogue and proposed during an active general practice of thirty years entitles a man to an opinion on therapeutics, I would reiterate with emphasis the conclusion given in Hare's System of Practical Therapeutics.

To sum up the aims, capabilities and results of hydrotherapy, it may be said we possess in this method a valuable auxiliary to medical treatment of many, *though not all*, acute and chronic maladies.

In many chronic diseases it has proved so successful after failure of medicinal remedies, that *no case should be yielded up as hopeless until hydrotherapy in some form has been tried.*

My observations at the Montefiore Home, which receives only incurable cases, demonstrate this fact.

Domestic treatment will suffice in most cases, but if this fails, a methodical treatment under an expert hydrotherapeutist may be of advantage to the patient.

The best consultants in Germany, Italy and France, men like Leyden, Charcot, Nothnagel and Erb, send their patients to these institutions, with their diagnosis and general suggestions, rather than with specific directions.

Finally, so much depends upon the reactive capacity of each individual, that only systematic observations can determine the most useful procedure in each case.

American Electro-Therapeutic Association.

Second Annual Meeting, held in New York, October 4, 5 and 6, 1892.

WILLIAM J. MORTON, M.D., PREST.

FIRST DAY OCTOBER 4—EVENING SESSION.

(*Continued from page 218.*)

THE VALUE OF VOLTAIC ALTERNATIVES IN OPTIC NERVE ATROPHY.

By Charles Eugene Riggs, A.M., M.D., Professor of Nervous and Mental Diseases in the University of Minnesota, St. Paul, Minn., Member of the Neurological Association, Member of the American Electro-Therapeutical Association.

My attention was first called to the value of voltaic alternatives in atrophy of the optic nerve by Dr. Webster Fox, of Philadelphia, who said that he had obtained from their use some results so surprising that he hesitated to publish them because of the incredulity with which he felt they would be received by the profession.

This strong recommendation from so eminent a man resolved me to make trial of them in my own practice should occasion arise, but for some time I was deterred from the habitual use of them by the fact that in the ordinary instrument the only way of alternating the currents is by the hand, which is not only tiresome in the extreme, but also undesirable as the frequent use of the commutator in this manner renders the battery unreliable for careful diagnostic work. Also in using the hand the precision of the make and break will necessarily vary a little; consequently there will not be the same smoothness of current as though the action were automatic. To remedy this defect I requested Dr. H. E. Waite to construct for me an automatic commutator, which has proved satisfactory in every way.

I first tried the voltaic alternatives upon a patient sent to me by Dr. Graham, of Minneapolis. He reported that when first examined he found the medea clear, hyperæmia of the optic disc, with outlines slightly blurred, veins slightly enlarged and tortuous, arteries reduced. The treatment before the use of the voltaic alternatives had been iron, quinine and strychnia, with no improvement resulting. After the use of voltaic alternatives had begun she improved very slowly, by almost imperceptible degrees. She was under this treatment for two or three months, and examinations made in the meantime by Dr. Graham showed unquestioned improvement in the eye condition. At the end of this period she was obliged to leave the city, but wrote me at the end of six months that the improvement had been continuous and was still going on.

For the next case that I treated I was indebted to the courtesy of Dr. E. H. Wood, of St. Paul. I subjoin the report of the case as taken from Dr. Wood's notes.

"J. W., aged 52, farmer. July 26, 1891. Says six months ago eyesight began to fail and 'everything looked milky.' No pain in head or eyes.

Examination:—Vision in right and left eyes, counts fingers at ten feet; not improved by glasses. Cornea clear tension normal. Pupil acts to light and accommodation.' Ophthalmoscope shows both optic discs very pale, medium-sized physiological cup, blood vessels medium-sized, vitreous clear and rest of fundi normal. No history of injury or syphilis. Says memory is getting very poor and that he often forgets what he came to town for. Has numbness of legs and arms, spastic contraction of fingers, no ankle-clonus, but there is increased knee-jerk in right and diminished in left leg. Diagnosis, atrophy of optic nerve. Treatment: Elix zinc ferri et strychnia, hypodermic of strychnia in temples and electricity, also large doses of potassium iodide.

Aug. 14, R. V.=6-36. L. V.=6-60.

Aug. 27, R. V.=6-24+1.5 D.=6-9. L. V.=6-36, not improved by glasses. Patient returned home.

My examination of the man demonstrated the existence of nervous trouble, indicated by the symptoms Dr. Wood had observed. The result of the use of voltaic alternatives in this case was most astonishing.

After the first week's treatment the patient declared himself decidedly improved, and the improvement was rapid and continuous while he remained under my care. That the improvement was permanent is witnessed by the subjoined note of Dr. Wood, who made a special re-examination of the case for the purpose of this paper a few weeks ago.

"Sept. 4, 1892.—Examined him and found that he had been working most of the time; said memory continued good, numbness and spastic contraction did not return and that his eye-sight remained about the same.

"R. V. without glasses 6-24, with plus 1.5 D.=6-9.

"L. V. without glasses 6-36, with plus 1.5 D.=6-9.

"Field of vision has never been carefully taken."

In a third case which was sent me by Dr. Chamberlain, of St. Paul, the treatment produced no beneficial result. This patient became discouraged after six weeks or two months treatment, and falling into the hands of "faith-healers" discontinued treatment, so that I do not consider in view of the fact that the trouble was of long standing, that the treatment was given a fair trial in this instance. I subjoin notes of Dr. Chamberlain upon the case.

"X. Y., aged 46, general office in R. R. land dept., came to me in April, 1890, complaining of a strained feeling about his eyes.

"R. V. 20-100. "L. V. 20-200.

"Myopic astigmatism of about two dioptries in each eye; this corrected gave him R. V. = 20-30, but did not improve the left save, as he said, to brighten it up a little. His work being largely reading of correspondents and examining fine lines on the maps and fine figures in books, I prescribed rest in addition to change in his glasses, the latter he obtained but the former he did not take.

"In giving his history, he said that six years previous while his eyes were undergoing an examination, he found that he had very little vision in his left eye, something he had not known before. The ophthalmoscope showed the left disc to be very pale and vessels reduced in size. The right disc, however, seemed nearly normal. He returned to his work and had no trouble with his vision until about June, 1890, when he returned to me saying that his vision was getting bad in the other eye. He had been working very hard and was reduced physically, so I advised immediate rest. The retina and optic disc of the right eye were in an irritable and somewhat congested condition. After a months rest, though physically improved, he could see absolutely no improvement in his vision, which at this time equaled part of 20-40 with the right eye, the optic disc being paler than normal, and the vascular condition being somewhat reduced. I put him upon potassium iodide and also strychnine, both hypodermically and by the mouth. I referred him to Dr. Riggs for electricity.

"Sharpness of vision slowly decreased. September 20 it was only a guess at 20-40; September 30 it was only 20-50, and by November was reduced to 20-60. About this time he passed out of my sight."

I am at present trying voltaic alternatives in a number of cases representing various forms of brain disease, but the experiments have not yet been sufficiently prolonged to justify me in recording any opinion as to results.

The stimulating affect of this current and its influence on nutrition is evident if one considers it in its physiological aspect. That the reversal of the polarity of the electrodes in its use is much more energetic than the simple closures, is very evident if one understands the nature of the phenomena.

De Watteville (*Medical Electricity*, p. 108) says, "When the electrode on the nerve is alternately changed from anode to cathode, and from cathode to anode, a series of closure excitations are given, which fall alternately in the polar (when the electrode becomes cathodic) and the peripolar (when the electrode becomes anodic) region respectively. Now in either case the excited region had just before been under anodic influence, and physiology teaches us that as we shall presently demonstrate on the human nerve, the instant the polarizing current ceases to flow the anodic region passes into a state of increased excitability. This augmentation is the more marked the longer the anodic influence has lasted. We see, therefore, how it is that voltaic alternatives act more powerfully than simple closures of the circuit, and that their action is intensified by previous current duration. We understand also why rapid reversals are the more effectual; for the positive modification after an electrotonus diminishes rapidly after the circuit has been broken; the longer the interval which elapses between the polar change of the electrode the less the hyper-excitability of the nerve will be, until it has returned to its normal state."

Althaus (*Medical Electricity*, p. 225) emphasizes also the fact of the increase of excitability when the voltaic alternatives are frequently repeated.

It is to be hoped that such workers in this line as Dr. Webster Fox and his coadjutors will soon lay before the profession the results of their large experience. In this article I have only designed to be suggestive and to stimulate my confrères to investigation, that the true value of this therapeutic measure may be thoroughly ascertained. If in the use of voltaic alternatives has indeed been found the remedy for even a part of the cases of atrophy of the optic nerve, the fact cannot be too soon established or too widely known.

LACERATIONS OF THE CERVIC UTERI AND THEIR TREATMENT.

By F. von Raitz, M.D., of New York.

Before entering upon the delivery of this subject, I feel it my duty to protest against any assumption which could tend to place me in one line with those who call themselves "Electricians," for I am a physician, and as such I use any agent which in my opinion is the best for a given pathological condition, be it water, fire, air, drug, electricity or the knife. And this paper here, which I have based upon 73 cases, which I treated, with various agents, is a clinical picture of nude facts, therefore, I shall first report of which characters they were. According to the depth of the rent, I arranged them in four classes as follows:

Class No. 1. slight lacerations.—19 left lateral; 4 right lateral; 6 bilateral. 29 cases. Subjective symptoms: none at all or various degrees of leucorrhœa, nervosity.

Class No. 2, lacerations about one-half inch deep.—4 left lateral; 2 right lateral; 14 bilateral; 1 posterior; 1 stellate. 22 cases. Subjective symptoms: uneasiness in the pelvis, pain in the back, lancinating pain, bearing down, menstrual, nervous and digestive disorders. Loss of strength and flesh. Leucorrhœa or not. Occasional dyspareunia.

Class No. 3, lacerations about three-fourths inch deep.—14 bilateral; 2 stellate. 16 cases. Subjective symptoms: similar to class No. 2, but the cases with mild symptoms are less in proportion. Occasional dyspareunia in same.

Class No. 4, lacerations near or up to the internal os.—6 bilateral. Subjective symptoms; as class No. 3, but still more severe in some cases. In one case, however, there were no subjective symptoms.

This classification shows in what relation the depth of the rent stands to the subjective symptoms; that is, slight lacerations may cause subjective symptoms, similar to those of deep lacerations.

Of Class No. 1, 29 cases, 14 only called medical assistance for leucorrhœa. Eight of these cases presented erosions of various degrees and also endocervicitis. The rest of these 14 cases, six, had endocervicits but no erosions. The endocervical discharge was various in character and degree but mostly purulent. The cervices were increased in size by congestion or some hyperplasia. Some cases had subinvolution of the corpus to a marked degree with tenderness on pressure.

Of these 14 cases, 4 I treated by electricity, tincture of iodine, glycerite-tamponade and hot douches, medicated with astringents or solvents, as the case required; 10 cases I treated as before but instead of electricity I used carbolic acid.

The rest of this class, 15 cases had no subjective symptoms, —the lacerations were smooth, the cervix, though slightly enlarged had a sound appearance. In some there was evidence that the rent was far deeper originally and was sewed by nature. These cases were treated with hot douches alone.

The manner in which I applied electricity, glycerites, carbolic acid, douches *a. s. f.* I shall describe later.

Of Class No. 2, the stellate, posterior and 3 of the bilateral lacerations induced very marked subjective symptoms: intermittent lancinating pains, bearing down symptoms, pain in the back, menorrhagia, traumatic metrorrhagia—after coitus—headaches, digestive disturbances, nervosity, loss of strength and ambition; leucorrhœa.

The objective symptoms in these 3 cases were: cervices considerably enlarged by the congestion resp. hyperplasia;

the ora and lacerations angry looking, discharging glairy or purulent mucous; granular, postular or vegetative erosions.

Bimanual and instrumental examination revealed: more or less prolapsus uteri and laxation of pelvic muscles and uterine ligaments; uterus enlarged and variously displaced, mostly in retro-positions. (One case of the bilateral type so much in retro-version, as to place the os near the symphysis pubes and the fundus in the posterior cul-de-sac). More or less tenderness in the hypogastrium. In one case difficult and painful defecation.

The posterior and one bilateral case, I treated by the knife, after a preparatory course of treatment; the bilateral healed up by first intention, the posterior partly by granulation. The other three of the five severe cases I treated by electricity, massage and manipulation, tampons and douches. The rest of class No. 2, 17 cases, presented subjective, objective and palpable symptoms, similar to the severe cases, but less pronounced. In some there was but slight and temporary uneasiness and the cervices, although congested, did not look bad at all, as the rent was smooth, and as there was no endocervicitis. One of these milder cases, a bilateral one, I treated with the knife, three bilateral and one left lateral with electricity, the rest, 12 cases, I treated with tampons *a. s. f.*

Class No. 3, 16 cases, presented symptoms similar to class No. 2, but here 4 cases only were really mild, (one stellate belonging to the mild ones). Six cases, bilateral, were quite severe, being complicated with periuterine inflammations. In some cases erosion of the lips was very marked, but the surfaces of the lacerations were smooth, though angry looking near the cervical canals which discharged scantily or moderately glairy mucus, speaking of endocervicitis catarrhalis. There were no erosions, but there was, very likely, endometritis or metritis.—I say "very likely" for it is not safe to diagnosticate those lesions in a subinvoluted uterus with certainty. The corpora were enlarged, admitting the sound from 4 to 5 inches, and variously displaced: two in retro-versio-flexio, one retroversion, one retroflexion, one sinistro-lateral, one antiflexion. There were rectal and bladder symptoms.

The rest of class No. 3, six cases, were not severe, though the subjective symptoms, compelled them to seek the bed at times. The uteri were in some slightly in version, mostly posterior, in others the position was normal. But all in a state of subinvolution and more or less descended.

Two of the severe cases I treated by the knife, one after preparatory treatment by electricity, one without it. The result in the first case was primary union and great satisfaction; the second case healed also in the end, but it gave some trouble and took more time. Six cases, including the stellate, I treated with electricity, and eight cases by tampons *a.s.f.*

Class No. 4.—Six bilateral. Concerning the symptoms there was no difference, except that the eversion of the lips was more marked. In one case the lips were very much everted, and yet the lady did not suffer at all and called at my office, only to be examined, as she thought to be pregnant. She was 36 years of age, had two children and two abortions.

When I made the digital examination I did not know what I felt. I hunted for the cervix but found none, instead, however, two tumor line bodies of elastic quality. And not until I placed her in "Sims" position, I knew I was dealing with a lacerated cervix, the lips of which were enormously congested and hyperplastic. The fundus was greatly enlarged and placed upon the cervix, hanging down in the posterior pouch. She was then, according to her statement, about six weeks in pregnancy. At about 4½ months she miscarried.

Two patients had peri-uterine inflammations.

Of this class, one I treated by the knife after preparatory treatment with electricity, two by electricity, three by tamponade with astringents and solvents, *a. s. f.*, all, of course with hot douches also.

When I speak of treatment with the knife in connection with lacerated cervix, I mean the performance of trachelorrhaphy.

I treated six cases by trachelorrhaphy; 15 cases by electricity; 37 cases by caustic and tampons; 15 cases by douches. Seventy-three cases.

The etiology of laceration of the cervix is always pregnancy. Now and then there may be a case due to rapid dilatation for pathological reasons. A diseased cervix will tear more readily than a sound one. Miscarriage will cause laceration. Superficial lacerations will grow deeper with each subsequent parturition.

The pathology is nothing but a solution of continuity of those structures which are torn, and has to be considered like a fracture of bone as far as the existing rent goes. As I have shown, the depth of the tear has no direct relation to the symptoms in general, therefore, other causes must necessarily, induce the complications on which the symptoms depend, for we have deep lacerations which are associated with slight subjective symptoms, and we have slight lacerations which are associated with much suffering. But subinvolution, congestion, and hyperplasia are directly depending on the tear and must therefore, be considered with the pathology of the laceration.

The manner in which subinvolution is caused is simple, in so far as clinical observation goes, for we know that involution of the uterus is retarded or interfered with in proportion to the length of the tear. Some sympathetic filaments around the os externum, which are more important than we ever shall know, are torn with the other structures, consequently the communication of the cervix with the corpus is interfered with in proportion to the extent of the damage and the vaso-motor contractors are not called to work. Now, the venous blood vessels, remaining engorged with blood, keep the capillaries and capilliculi in a state of distension, which gives rise to what we term congestion, which again prevents perfect oxygenation of the tissues. As this condition persists, the muscular fibres lose their tonicity and the top-heavy fundus will bend them in just that direction which will be given by the influencing bladder or rectum, consequently we will get those various flexions. Or, if the tonicity of the muscle fibres is still strong enough to oppose bending, absolutely or partly, the top-heavy fundus will gravitate downward just the same, and also in the same direction given by the bladder or rectum, and we get the various versions or versio-flexions. And as the habit of the patient will be concerning defecation and urinating, we will get either retro or anti-displacements. So the bladder and rectum are influencing the direction of displacements and after displacement is finished, the fundus will influence them also, and we get bladder and rectal symptoms.

Now the interference in circulation is still greater, the uterus grows more and more heavy, the ligaments are taxed in proportion, lose their tone, and we get descent, and even prolapsus. Finally there comes a time when all pelvic structures will suffer more or less congestion. As congestion persists, and as oxygenation becomes more and more imperfect, changes in nutrition must follow and consequently, we get hyperplasia.

Now as there is congestion and hyperplasia, that is altered nutrition and tissues, the nerves suffer also, and we get reflex phenomena which make some women objects of pity. There are headaches, digestive disturbances, palpitation of the heart, restlessness and sleeplessness, and I do not know

what else, in addition to the pelvic aches and pains.

As there is altered nutrition, there of course must be altered function, and we get menstrual disturbances due to perverted innervation, due to mechanical obstruction with some degrees of flexion and version. The altered condition of the mucous membrane, naturally, is a main factor, for a long-standing congestion will cause fungosities of various character, endocervicitis, endometritis catarrhalis, even suppurans, which again may grow into metritis and peri-uterine inflammations. Fungosities and endometritis may cause metrorrhagia. Of course, the just named inflammations, even if associated with laceration, may have another cause.

Erosions, of whatever character, are due to endocervicitis, and we have them without laceration just as well; and, as a matter of fact, these lesions are complicating the superficial lacerations more often, for the reason that the deeper the rent, the more cervical mucous membrane, the factor of the discharge, is destroyed. The more purulent and acrid the discharge the easier erosions can form. Coitus will then aggravate them. It is perhaps wrong to consider these lesions under this head, but as congestion causes endocervitis, they may be mentioned here. The same may be said of endometritis, metritis and peri-uterine inflammations.

Symptomatology and *diagnosis* need no further consideration.

The prognosis of even the worst cases is good in the hands of an intelligent and energetic surgeon. It depends, if trachelorrhaphy is to be performed, not only on the operation, but more so on the skilful preparatory treatment and on the after-treatment.

The treatment must necessarily vary according to individual cases, but yet, if we rest upon pathology, this knowledge will give us valuable rules, according to which we can treat. And, as we have seen, the laceration itself does not often require treatment, but the secondary manifestations. Thus, if we have to treat a superficially lacerated cervix, without endocervitis and erosions, but with hyperplasia and a subinvoluted uterus, our aim must be to reduce the size of the cervix and corpus. The laceration will then take care of itself.

Now, considering the means of reduction, we find that douches and electricity take the foremost place, but astringent tonic applications, as various acids, fluid extract of hamamelis, Kennedy's white fluid extract of pinus canadensis—which contains alum and zinc-sulphate—tincture of iodine and of chloride of iron, are useful adjuvants.

There is a great difference in the efficiency of hot douches. To expect the best effect, hot douches have to be taken in the recumbent position with the pelvis considerably elevated; but the posture must be so as to allow the patient perfect comfort. This is experienced when the head is raised to a physiological level to the heart. To increase the effect of the hot water, alum with borax or carbolic acid, sulphate of zinc or any other astringent, may be added in a proper proportion; they act at the same time as antiseptics. The water should be as hot as can be borne (some will tolerate 120° F.), and the quantity should be a gallon. Douches properly taken will allay nervosity, produce sleep, and inspire the patient so, that she will gladly take three per day, and if they are persevered in, they alone will cure many cases. The importance of elevating the pelvis has been demonstrated anatomically and pathologically before this, but it is surprising that there are still gynecologists who take it lightly.

In case the congestion and subinvolution demand more vigorous treatment, electricity is the agent. Charge the cervical cup with the constant current, and place over the hypogastrium, or umbilical region, a suitable electrode with the negative pole.

If the cervix is properly protected by absorbent cotton, and if the external electrode is large, a current up to 100 ma., gradually attained, is borne for about five minutes, without much complaint. After this, and without changing the electrodes, a high tension faradic current of good but agreeable strength is given for about five minutes. Then the cervix will be dried and treated with an astringent by the brush or on a wool tampon, which latter remains *in situ* for twenty-four hours, during which, of course, no douches are given.

Keeping the pathology in mind, it must be clear why in congestion (subinvolution is the same), the positive pole must act, and why the constant and faradic currents are useful.

Those who have applied the negative current under these conditions have been disappointed, though they relied on some authors who speak of hyperplasia and of hypertrophy cervicis or uteri as if they were of one and the same character, while they ought to know that hypertrophy is but seldom a pathological condition, but a consequence of over-physiological function, as in the heart or in a bone, or any muscle. Hypertrophied tissue shows a normal histology.

Hyperplasia is quite a different condition, and histological examination always shows the tissues in pathological association. It is due to inflammation of any character, to perverted nutrition and to congestion. And therefore a cervix and uterus can never hypertrophy, but they can be in hyperplasia or congestion.

We have cervices which are hard or soft. A congested cervix may be as hard and as large as a hyperplastic one; we have also cervices which present both conditions in one patient. Often it is difficult to differentiate between these conditions, but if we remember that a congested cervix has a deeper hue and a hyperplastic cervix a paler hue, we will without difficulty know whether we have to deal with one or the other condition or with both.

In those cases which present both conditions, the positive pole must be applied to the cervix first, and when the congestion is dispersed, then the negative pole takes its place.

A hyperplastic cervix calls for the negative pole and for solvents, such as glycerine, with lysol, or similar acting agents. Douches, of course, when the tampon is removed.

After there is some softening, the positive pole and astringents are brought into play; and when the positive pole and the astringents or alterans have acted sufficiently, then the negative and solvents; and so on, changing till reduction is accomplished.

The frequency of sittings depends on the strength and idiosyncrasy of the patient—as a rule twice per week, but for some three times per week. Some patients again, with decided nervous symptoms, will not tolerate more than once per week.

The strength of the current depends also on the idiosyncrasy of patients, but weak currents of long duration are far more successful than strong currents of short duration, and it is of importance to avoid cauterizing. As a rule, about 40 ma. for from ten to fifteen minutes are all that is necessary, and are borne with ease if the cervix is well protected with absorbent cotton.

Erosions have to be treated by caustics of which the positive constant current, also mildly applied, is best; but as it is depending on endocervicitis this lesion has to be treated at the same time.

Endocervicitis is generally associated with hyperplasia cervicis, and seems to be the cause of this condition as well as of erosions. To combat this complication, nothing is more useful than the galvanic negative pole attached to a nude uterine copper electrode. From four to six sittings, each of about ten minutes with a current of from 15 to 20

ma., followed by glyrerite or pinus-tampons, will effect a cure and at the same time help the hyperplasia. If associated with a congested cervix the positive pole must be used after two or three negative applications. But then the positive must not exceed 15 ma. for eight minutes. The treatment for *cervicitis* is as for hyperplasia.

Endometritis and metritis is to be treated as the endocervivitis. Curetting is inferior here and more objected to by patients.

Periuterine inflammations complicating laceration of the cervix have to be treated as if they were not complicating it.

Menstrual disturbances complicating laceration depend on either endometritis, lesions in the adnexa, subinvolution or malposition; and perhaps also on perverted innervation. As soon as these causes cease, the menstrual disturbances will also cease.

Malpositions, or displacements as others term them, of all kinds of versions, flexions and prolapse, complicating laceration, are due to subinvolution, and therefore it is worse than useless to correct the malposition before a certain degree of subinvolution has been overcome. Pessaries are injurious; operations for replacement are rarely successful, but the course of treatment mentioned before always accomplishes enough reduction to allow the prolapsus, version or flexion, if it is free from adhesion, to approach its physiological locus, especially when massage and manipulation are applied; because the engorged viscera are depleted and the muscular, serous and mucous structures regain their tonicity. Massage and manipulation combined with hot douches, will replace in all cases, the uterus, even if there are adhesions.

Rectal and bladder symptoms are due to malpositions of the uterus, and to pelvic inflammations, and will disappear with their causes.

Sterility is due to endocervicitis and to endometritis in many cases, in others an advanced degree of congestion or hyperplasia is the cause.

Abortion is due to sharp-angled flexion, congestion and hyperplasia,

Miscarriage, however, is due to the rent itself, when it occurs in a patient with deep laceration; the internal os is deprived of its support and gives away to the increasing pressure.

The various neurotic phenomena, which are a great source of anxiety in some patients, are not depending on any degree of laceration, for some patients with moderate lesions will greatly complain about these phenomena, while others with severe lesion won't notice them at all. But as these nervous symptoms improve with the improvement of the subinvolution, that is, hyperplasia, or congestion of the uterus, it is reasonable to attribute them to perverted nutrition in consequence of which the cervix and corpus not only grow sensitive, but also transfer their troubles reflexly to distant organs.

Moreover, it seems to me that hyperplasia causes nervous symptoms more pronounced than congestion; and this explains why some observers speak of anæmia cervicis and pressure by the hardened tissue on the filaments of the sympathetic as causes of these troubles.

Occasionally there will be in some patients, dyspareunia, which depends on the morbid sensitiveness of the cervix and also on the erosions.

Thus far I have not mentioned anything concerning trachelorrhaphy, as I intended to consider this operation after all other means have been ventilated, but now comes up the question,—is trachelorrhaphy ever necessary? Before answering this question for any given case. we have to consider the character of this lesion, the degrees of the complications, the severity of the subjective symptoms, the age of the patient with reference to her procreative power, and lastly the wish of the patient.

Suppose a patient calls a gynecologist and complains about severe subjective symptoms which point toward her sexual apparatus. He, examining her, finds a bad laceration almost up to the internal os with everted and enormously enlarged lips, which are hard and painful to the touch; the fundus, flexed upon the cervix, hanging down in the posterior pouch, being also painful to the touch. He learns there is constipation and painful defecation, and that she is growing from bad to worse and disgusted with her life. He also learns that she was treated already by one or more physicians but without relief. He advises trachelorrhaphy and enters upon a real good preparatory treatment, but without using electricty. The patient improves now in every way and this misleads her to refuse the operation. But after a time she feels her troubles returning and hears that electricity was used on some women with similar complaints, quite successfully. Being afraid to undergo the operation for trachelorrhaphy, she is now treated with electricity, receiving of course, hot douches per vagina and rectum, and also, later, massage. She improves now very much quicker, for the congestion and hyperplasia yield to the currents and so allow the uterus and pelvic structures in general to regain their normal tonicity. Finally the uterus returning to its physiological locus, removes the rectal symptoms, leaving the patient comfortable, and after awhile cured.

In case such a patient does not live in sexual relation she may nevermore experience any trouble, but if she is to have sexual intercourse the membrum verile, especially if it be long, will find its way between the lips and will irritate the laceration and give rise to similar troubles she was suffering before; or, in case she goes pregnant, she will suffer a miscarrage at about the 4th month. Therefore such a patient ought to have her cervix sewed up, and will generally consent to the operation if she will be made to understand her condition.

Hot water, electricity and massage, combined with constitutional and hygienic treatment, where it is necessary, will practically cure most cases of laceration, but the deep lacerations which cause eversion of the lips, occurring in women of sexual activity, must be sewed up. But even those cases which require the operation should be treated with electricity during the time of preparation as it insures far better results.

No. 101 West 132d Street.

Discussion.

Dr. Goelet said that while electricity might relieve or cure many of the results of lacerated cervix, Emmet's operation of trachelorrhaphy was the only *cure* for this condition itself.

Dr. Gunning said that his curiosity had been aroused by the general plan advocated, but he was rather at a loss to understand its special application to the conditions attacked; he did not know how much to attribute to the electricity, and how much to the other treatment employed at the same time.

Dr. von Raitz, in closing, said he performed trachelorrhaphy on those cases which needed the operation, but the treatment advocated in the paper was directed especially against the complications resulting from the laceration, as it was from these, chiefly, that the patient suffered. When he had treated these cases without electricity, much more time had been consumed in securing the results, and they had not been so good. He was firmly convinced as to the utility of this preparatory treatment.

(*To be continued.*)

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SATURDAY, MARCH 4, 1893.

THE INDICATIONS FOR LITHOTOMY.

After strivings as long and as devious as the history of civilization, the problem of removing the stone from the urinary bladder may fairly be declared solved. That minor improvements in the crushing procedure or advances in the prevention of calculus disease are yet possible is not to be denied, but there can be no exaggeration in the assertion that no equally painful, disabling, and eventually destructive malady has been more perfectly placed within curative power; no more important surgical measure reduced nearer to proximate perfection.

To master, not by methods essentially preventive, a disease of like prevalence, passion and mortality, so completely, so quickly, by means most agreeable to the feelings of the patient, and yet with a mortality of probably from one to five per cent., is a surgical triumph unsurpassed. The achievement is also remarkable, if not unique, in the lines upon which it has been wrought. Most other decisive victories of modern surgery rest confessedly in a large measure, upon aseptic wound treatment and anæsthesia. The conquest of vesicle calculus is a feat of engineering and technical skill resting almost solely upon mechanical ingenuity and the tactus eruditus, elements which in recent surgery of other lines have been brushed aside by clumsier, if better qualities. In the solution, asepsis, and especially anæsthesia have doubtless played a role, yet, as accessories rather than principals.

Logically, the stonecutter's occupation, like OTHELLO's, is gone; but the genius of vesicle surgery mellow with age, antedating authentic history, and mindful of the indiscretions of his youth, modest and patient, clamors not for the exclusiveness of the abdominal folk, but waits without scolding, till others learn the better way. Hence, although litholapaxy, in both sexes and all ages, in the hands of experts has reduced the mortality to a point with which no cutting operation may hope to compete with prompter recovery, and by methods more acceptable to the patient, yet lithotomy is still practiced more or less on every hand.

What then, are the indications for lithotomy to-day? In a literal sense their existence is questionable. There occur frequently, possibly always will remain, cases of vesical disease in which stone exists and for which a cutting operation should be chosen. The knife, however, is indicated not on account of the stone *per se*, but chosen rather for the other conditions. The stone is frequently but an epiphenomenon, and the factors, which in judicious counsels decide against the lithotrite, are practically always other than the calculus. Why longer apply to an operation the name of an indication for which it is never more to be judiciously done? Plainly, stone is best treated by litholapaxy. Many conditions, some of them complicated by or consecutive to vesicle calculus, are best treated by incision of of the bladder. This latter operation is cystotomy, and only the soothing bonds of tradition hold us to the name of an obsolete, if not lost art. It may be argued that lithotomy is a name too illustrious and well known to be changed, reasoning that fails when as in this case, a name is a silent teacher of error. It beguiles many into the belief that the knife is still a competitor with the lithrotrite in the treatment of stone, *per se*, an objection sufficient to demand the burial of the dead; yet worse, it constantly complicates and obscures the consideration of vesicle operations by bringing the prejudices, the traditions and the dead statistics of operations undertaken chiefly or wholly for the removal of stone, to cystotomy, now applied chiefly to a different class of affections.

It is not long since such factors as great hardness, size above an inch in diameter, the impubic urethra and inexperience in the operator were prominent among indications for lithotomy. To-day they are deservedly allowed but little weight as primary indications. Probably the stone rarely, if ever, exists of a density capable of resisting a combination of the best modern lithotrites and the highest operative skill. Size alone is found of less importance, while increasing popular intelligence and wide diffusion of professional skill renders the future occurrence of immense calculi unnecessary, even scarcely possible, while the work of KEGAN and others have shown that childhood as an indication for lithotomy and a bar to crushing is very largely a figment of an imagination imbued with satisfaction with the results of a a favorite but inferior method. The argument of inexperience in the operator falls with strange inconsistency upon ears accustomed to the special solicitude shown the female abdomen, at least in the lit-

erature. Is it more sweet to die of a wound of the bladder than the belly? Future historians might, with some fairness, conclude that during the past decade the chiefest ignominy had been death from incompetent operation upon the abdomen, since so little comparatively is said of preventable deaths from other equally important and often more difficult operations.

But for the purpose of solving this problem it is not necessary to plead the specialist doctrine; a gospel at once full of truth and inconsistency. Indeed it goes without saying that special skill and experience are always an advantage in whatever line, but this is not always best and most consistently secured by an artificial specialism. It is idle and disingenuous, if not demoralizing, to discuss the ethics of choosing an inferior method because, forsooth, of inexperience with a safer, in the midst of a redundancy of competence. But such a discussion is rendered wholly gratuitous by the simple fact that lithotrity has always in all hands been, on the average, less mortal than lithotomy in like hands. In practice these old indications for lithotomy must receive some considerations, but they must be dislodged from a place among prominent or decisive indications for the knife, and cannot longer go unchallenged as formal teachings to soothe the conscience of those inclined to cut for stone because it pleases their convenience, whim, or indolence to choose this method.

Quite otherwise is it with those cases of diseased urinary tracts containing stone, such as vesical tumor, very severe chronic cystitis and prostatic hypertrophy in which operation is desirable, or which presents great obstacles and even positive barriers to litholapaxy, encysted stone, uncrushable foreign bodies, and deep urethral stricture. These conditions being well established are operated for and the stone incidentally removed. It would seem the height of inconsistency to term these indications for lithotomy. There exists stone and other disease, on account of the latter the urinary reservoir requires to be invaded and relieved by operation, during which the calculus is easily disposed of.

Having recognized this principle, the question of which method of lithotomy shall be chosen is more easily solved. Discussions and comparisons of the various perineal incisions and the supra pubic as modes of lithotomy of necessity leads to battles of the windmills. Not only are they comparisons of unlike, but of largely imaginary quantities. We shall probably never know practically and on a large scale, whether lateral or supra pubic lithotomy is the better operation for stone, certainly there is little to prove that the revival of the *sectio alta* for calculus was more than a fashion; whereas, there is quite as much certainty that supra pubic cystotomy for the purposes for which we at present invade the bladder is much more efficient in most cases than any form of perineal incision, while the incision of lateral lithotomy has little, if any place in the surgery of to-day. Its applicability is certainly not wider than that of the knife for stone, *per se*, which has already it is believed been reduced to *nil*. This would undoubtedly relegate most of these cases complicated by or consecutive to stone to the supra pubic route, this, however, must not lead to the deduction that the *sectio alta* is *per se*, the best means of opening the bladder. Indeed regarded as an operation pure and simple, there can be no question that entrance by the median perineal route, even when the incision involves most of the prostatic fibres, is an operation of less severity, more easily executed, more rapidly recovered from, and less troublesome to patient and attendants in its immediate after treatment, and it manifestly should be chosen when it is clearly adequate to the work to be done. When not chosen it is simply because in most of these cases it is inadequate to the best performance of the object in view.

With the more accurate determination of the exact work to be accomplished before operation is begun now being largely achieved by the cystoscope, the perineal route will doubtless more often be chosen, but only in isolated cases complicated with stone. Cases of deep or bad stricture, with very small stones, or foreign bodies, or certain clearly defined tumors easily removable through the prostatic urethra, dilated to admission of a digit or partially incised, should without question receive this treatment. In short the whole aspect of vesical surgery has so completely changed within recent times, that it is manifestly inexpedient to longer gravely discuss lithotomy and its indications, the scenes have so shifted that truth and perspicuity are better served by other terms. Litholapaxy having been practically perfected for vesical calculus, we now have to labor for the greater perfection of supra pubic and perineal cystotomy for a number of diverse pathological conditions, with some of which stone occasionally coëxists; and one of the first steps in the new questions is doubtless a more preliminary topographical survey and diagnosis. In the past the high operation has not seldom been done for conditions which could have been as thoroughly and more judiciously dealt with by the simpler method had assurance of the state of affairs found been previously made out, and others undertaken by the perineum, which might have been better managed by the supra pubic plan, had it been possible to know as much before as after entering the bladder.

THE TITLES of papers to be read in the Sections at the ensuing meeting of the American Medical Association should be sent to the Chairman or Secretary of the Section where such papers belong as soon as possible, in order that the Section officers may be able to select gentlemen to lead in the discussions.

THE OBJECTOR.

Once upon a time it was our melancholy duty to attend a general meeting of the members of the medical profession, which had been called to take action pertaining to the decease of a highly respected brother physician. A chairman and secretary were selected, and on motion the usual committee was appointed to bring in resolutions suitable to the occasion. These were promptly reported, and after several speakers had referred to the exemplary character of the deceased, one of the brethren arose, and said he felt it a duty incumbent upon him and somewhat unpleasant to perform, but he could not sit still and witness the passage of those resolutions without a personal protest, inasmuch as the preamble referred to the dead man as a distinguished physician. That he never knew of the deceased having done anything to merit so eulogistic a title as that of being a "distinguished" member of the medical profession. The speaker said he knew that Dr. W. had been a successful teacher of anatomy in one of the colleges, had served as surgeon of a regiment during three years of the war, and a term of years as superintendent of a lunatic asylum, but all this, in addition to years of everyday private professional practice, did not entitle the gentleman to the prefix of "distinction" before his name, and hence his objection, and moved that the offending word be erased from the preamble. As there was no second to the motion, the mover thought his motives and remarks were not appreciated, and feeling lonesome, concluded to flock by himself and took his departure.

In most respects the objector was a good man, but saw nothing good in anything unless it presented an opportunity to object or enter a protest.

In a neighboring city the active working elements in the medical profession have for a number of years been segregated, and their influence greatly weakened, by being divided up in a number of societies. Attempts at a union of all in one have heretofore been frustrated by a few who held on to some ancient traditions, which gave them an opportunity to object to any sort of an amalgamation. Good and able men, every one of them, but one of the supreme purposes of their lives could not be let pass without their protest going on record. We are pleased to say, the union is an accomplished fact, and we predict that great good will come of it.

In another large city the local profession is divided into a number of rival elements for the support and conduct of a number of medical schools. In professional attainments the physicians of that city are the peers of those in any other city that can be named. Each school has one, two or more men in its faculty who are qualified for their positions and have the gift of easily imparting knowledge to others, and are excellent teachers, but the influence of these men is greatly impaired by their professorial associates, who may be superior practitioners of their art and excellent in every other way, but are not capable teachers. These gentlemen of both classes will say, and honestly too, that they favor the advanced, the new medical education that is rapidly pressing its way to the front, but when a proposition is made, to unite all the city schools, so as to form one great teaching university, where everthing pertaining to the art and science of medicine can be taught by thoroughly trained teachers, the objector rises to enter his protest against such a union, remarking that there are certain vested rights to be considered in the formation of such a combine. That certain gentlemen have in the past made contributions of time and money that cannot be ignored, and although they are not equal to the best of teachers in their department, still, they must be provided for, and such a union as that contemplated, will cause these gentlemen to be left out. And anyhow the objector goes on to say, two or more schools engender a healthy rivalry, that is better for all concerned, than to have one school alone in a great city. Forgetting that there may be a rivalry not only between the several professors in a great institution, but also between the great schools of the great cities.

One great school in either Berlin, Edinboro, Vienna or Paris is sufficient to absorb the acceptable medical teachers of an empire. So we are free to say one great school of medicine amply endowed with laboratories, and all needed accessories, including a faculty holding endowed chairs, is sufficient to meet all the wants of all the medical students whose homes are geographically tributary to any city west of the Allegheny mountains.

The time has passed and is forever gone for the organization of Commercial Medical Colleges, and the time is right now and propitious for the contemplation and bringing about of a union of all such contiguous institutions, and for the creation of colleges that have a firm and lasting foundation; which will stretch forth and draw into their faculties a corps of men who are trained to teach, and may be truly designated as medical pedagogues.

It is with great pleasure that we note the creation of a Section to be devoted to medical pedagogics at the Pan-American Congress. Such a Section in the American Medical Association would be singularly useful.

To the Editor of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

Dear Sir:—On page 191 of the February 18 number of THE JOURNAL, is an article in which Dr. L. S. Pilcher, President of the Medical Society of the State of New York, gives the American Medical Association to understand that *he* and *his* society are grandly indifferent as to anything the American Medical Association may do or say. And you, in commenting upon the same, say:

"In this action of the New York State Medical Society, there seems to be a rolling back and away of the clouds and mists that have obscured the relations of that organization with the American Medical Association," and further you say "that you look hopefully to the committee appointed by the American Medical Association at its last meeting to report for approval of and adoption by that organization of a Code of Ethics, Constitution and By-laws that will be acceptable, and provide an organic law that will make possible a unification and membership in one body of every practitioner of rational medicine in this country."

Now will you kindly permit me to have a say-so in this matter? If Dr. Pilcher and his society are totally indifferent as to any action the American Medical Association may take in the way of bringing about peace and harmony in the profession, what can the committee hope to do in the premises? Is there any hope of making peace with a man who regards you with perfect contempt? If there is a man in the United States who can frame words that are more expressive of utter contempt than are found in Dr. Pilcher's remarks on the past action of the Association, let him stand up. And if the committee appointed by the Association at its last meeting have no more back-bone in them than to try to pacify Dr. Pilcher and his society, they deserve all the contempt with which they have met at his hands. Very respectfully,

W. P. HOWLE, M.D.

Oran, Scott Co., Mo., February 23, 1893.

If the JOURNAL's correspondent will carefully read the proceedings of the New York State Medical Society he will observe that DR. PILCHER, in his address recommended the appointment of a committee to confer with the committee from the American Medical Association, and that the Society as a body went even farther than this in their desire for a condition of amity, and by a unanimous vote forestalled the purpose of those committees, by revoking the new Code of Ethics which had been created and adopted by the society some years ago.

The purpose of this action seems to us to have been intended to act as a removal of a serious bar of antagonism that stood in the way of a speedy renewal of the old relations of affiliation with the American Medical Association. Our natural inference is that such was the motive and spirit that actuated the members of the New York State Medical Society. So mote it be.

So far as even an apparent expression of contempt on the part of DR. PILCHER is concerned, we fail to perceive it, and do not believe he had any intention of making use of an expression conveying such a meaning.

So far as our own reference to a revision of the Code of Ethics is concerned, we are free to say this was demanded by the American Medical Association at its last meeting, or it would not have appointed a committee for that purpose.

NEBRASKA STATE MEDICAL SOCIETY.—The yearly meeting of the Nebraska State Medical Society will take place at Nebraska City, May, 16, 17 and 18.

DOMESTIC CORRESPONDENCE.

Removal of the Ovaries, etc., in Public Institutions for the Insane.

To the Editor of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

I am quite in sympathy with Dr. Rohé in his protest (in the current issue of THE JOURNAL) against the editorial article of February 4, under the above title. I was minded to attack it myself immediately upon its appearance, but desisted because it seemed to me that an attack would have more weight if it came first from an experienced gynecologist. But now that this attack has been made, I venture to add (and I am not a gynecologist at all) that as against the deliverance of the "legal member" of the Lunacy Committee of the Pennsylvania State Board of Charities—that neither the patient nor her friends for her can give legal consent to the operation, etc.," it may be said that neither can she, nor her friends for her, give legal consent to the disposition of her body or her property. But as this might work hardship to herself or her friends, or both combined, the courts may undertake, upon the representations of competent and reliable persons, to do either or both for the benefit of the insane person.

If therefore the courts can order her incarceration as a precaution against personal injury, or the disposal of her property to prevent financial loss, may they not have authority to order an operation, if surgeons of acknowledged skill and integrity decide it to be advisable? And does not this make, as it should, the judgment of these surgeons, after all, the judgment of the court of last resort?

As against the idea of the chairman of the committee (Dr. Morton) I want to suggest that outside of the question of cure, there is a sociological question which should not be forgotten.

If every insane woman could be kept in a detention hospital, where there could be no association with any but her own sex, this might be of little importance. It may be so in Pennsylvania. But in Iowa it is the custom to return the incurable insane to the care of their friends at home if they have homes, and if not, to the "county house" of the county from which they came. In either case there is more or less commingling of the sexes, and occasionally undesirable results follow.

Recently a friend of mine made an oöphorectomy upon a selected case in the "county house." She made a rapid recovery from the operation, and for a time gave promise of a return to sanity. Later on, however, she relapsed into the old mental condition. But inasmuch as her insanity had a markedly erotic type, we all felt that the operation was properly undertaken; because it gave the woman, as well as the public at large, a safeguard worth having, even if it was negative in result from a remedial standpoint.

This view, I think, must commend itself to all reasonable people.

H. B. YOUNG, M.D.

Burlington, Ia., February 18, 1893.

Revision of the Code of Ethics.

To the Editor of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

Dear Sir:—THE JOURNAL of February 18, 1893, contains two parts of an address by the President of the Medical Society of the State of New York, and one part of the report of a committee on the President's address. A few comments on those parts of the address and on the committee's report may be in order, since they relate to the ethical question now under discussion.

1. In June, 1892, the American Medical Association appointed a committee to meet like committees from the New

York State Medical Association and the Medical Society of the State of New York, and hold a conference "for the purpose of adjusting all questions of eligibility of members of the said Medical Society of New York to membership in this Association." It is apparent that the object of the American Association was to learn the particular grievances of the disaffected and to devise means to soften them, to bring back many who had strayed from the fold, and to stifle the bitter disputes which have proved so injurious to them and to the whole medical profession; but they have rejected the proposition in a spirit that scarcely indicates tolerance. The resolution transmitted by the Permanent Secretary of the American Association seems sufficiently explicit, but is caviled at, although its intent is acknowledged.

2. In the address delivered before the Medical Society of New York, the following may be noted: "It (the American Association) is a voluntary association, responsible to no one, and may change its standard of admission at its will." The American Association, like many other scientific organizations, is voluntary, but it is responsible for its acts to all honest men. It is not less pure because voluntary, and being voluntary does not lower its standard of morals, while this enables it to admit to its ranks those only who subscribe in good faith to its code of morals. The disaffected would probably like the Association to change its standard of admission not at its will, but at theirs.

3. Another noteworthy specimen of the tone of the address is the following: "It (the New York Society) must content itself with regulating its own standards, as it now does, suggesting in turn that it is equally indelicate for organizations which have no supervising relations to it to extend advice as to its internal affairs." This is the same as saying that the American Association must not meddle with the affairs of the New York Society, which shall have no ethical code if it so decides; and it has so decided. After this decision, the American Association will be justified in saying that it will not meddle with a society that repudiates good morals.

4. The committee on the New York Society address concluded their report by offering a resolution which, with the report, was "unanimously adopted." The resolution is to the effect that the Society deems it unwise to appoint the Committee requested by the American Association "but the Society ventures to express the hope that the American Medical Association, at no distant day, will take such action as will remove the merely technical obstacle to the most cordial coöperation between the two societies." To hope that there can ever be any coöperation of two bodies of men, one of which recognizes no code of morals, seems as futile as to expect Christians and Mohammedans to join hands on questions of faith! There is no mere technical, but an insurmountable obstacle in the way until the Medical Society of the State of New York readopts the system of morals of the National Association; until then how can there be comity or any kind of recognition, if the "general sense of the profession" be rightly interpreted?

5. The "no coders" may imagine that they shall be able to do as they please, but will find themselves constantly confronted by customs, by ethics good and bad from which to choose. All kinds of men, savage or civilized, honest or dishonest, have their ethics. About two centuries ago the ethics of beggars were codified by a scholarly mendicant. The perusal of the document is as instructive as it is entertaining. Bandits, burglars, cutpurses, sneak thieves, receivers of stolen goods, and other miscreants, have their written ethics, among which is the well known provision that there should be honesty among rogues. Men of these several classes adhere consistently to their ethics, and are unanimously in favor of abolishing the criminal code and the decalogue, which are in such conflict with their actions. But it does seem incredible that men belonging to a liberal profession should reject a code of good morals which tells them to be just and how to be just! It is a monstrous anomaly, in this enlightened age, that men of reason should not want laws which forbid that injustice should be done to them! One of the sayings of the "no coders" is that "no man shall regulate their actions." As every student of philosophy knows, moral laws are not made by single individuals; they result from the researches of many moralists who compile the records of good actions, good customs, which, by others, are arranged systematically, and which are finally codified by organized associations of men, just as many laws have been compiled and codified from the most ancient customs.

6. The opponents of the National Code do not appear to have found out how laborious it is to codify and properly formulate moral maxims. If they had been aware of the difficulties of accomplishing the task creditably, they probably never would have rushed forward with their "new code" and the "newer code," and most likely would not have attacked the American Code. The last hasty performance of the State Society of New York was the abrogation of its "new code" and the immediate declaration for "no code," as its committee and all the members may have thought, but the committee, seemingly without intending to do so, did recommend a "new code No. 2," which they style rules, and which was unanimously adopted by the Society. In order that this "new code No. 2" be clearly and unmistakably understood, its sentences will be separated so as to represent distinct paragraphs, as follows:

a. "The Society reserves to itself the right to punish its members for any unprofessional conduct."

b. "The determination of what shall be considered unprofessional conduct shall rest with the Society."

c. "If at any time charges are preferred against a member of the Society, these charges shall be referred to a committee which already exists for a similar purpose."

d. "This rule shall take the place of paragraph eight of chapter six of the by-laws, as well as the rules adopted by this Society in February, 1892."

Such is the present Code of Ethics of the New York Society, despite its declaration that it has no Code. It is unpleasant to be placed in a wrong position, but it is unpardonable in a committee to render ridiculous the body it represents. The commentary on these four remarkable paragraphs will be brief.

a. Assuredly the Medical Society of New York would not be likely to delegate the "the punishment" of its own offending members to some other institution. Without meddlesome intent, it is mildly suggested that the rule reserving the right to punish seems superfluous.

b. It does not appear that the State Society of New York has determined what shall constitute unprofessional conduct. If such determination is not in its archives no member can with justice be tried and condemned for the violation of a law which is not clearly defined and recorded.

c. It seems like the extreme of inconsistency and injustice for a society to entertain charges preferred against a member, when that society has neither published nor established an intelligible standard of morals, notwithstanding that there already exists a committee for a "similar purpose."

d. The committee very properly gives the name rules to this "new code No. 2" which is to replace the set of rules called "new code" in February, 1882, because most codes of morals consist of a statement of rules of conduct. But unfortunately neither the abrogated "new code" nor its substitute "new code No. 2" contain distinct statements of rules of conduct. Unprofessional conduct is too general, too vague, it has many degrees which should be stated.

This brief examination leads to the conclusion that "new

code No. 2" is incomplete and that it will probably require at least seventeen paragraphs, but if the new paragraphs be like the first four, no member need fear to be "punished."

7. It is not safe to attack a carefully prepared document known to have stood the scrutiny of many scholars for forty-five years in respect of its teachings and literary merits. Its detractors having failed to show cause why it should be abrogated, their case will probably be dismissed and they will consequently have no standing in the Association. Fanatics may repudiate the admirably phrased moral precepts of the Code, but these maxims will be read as long as truth is loved, as justice is revered, as honor is prized, as virtue is is cherished, as sublime thoughts are admired, and as long as there is the least semblance of literary taste.

8. The advocates of the American Code have had no other motive than the defense of the production of such moralists and scholars as Percival, Hays, Clark, and others, from the gratuitous attacks that have been made upon it by the disaffected and by their champions, who characterize its language as obscure and redundant, and its provisions as unnecessary and useless. But these attacks have consisted of mere assertions unaccompanied by evidence or argument. On the other hand, after repeated examinations, the defenders of the Code found its dominant characteristics to be explicitness without verbosity fullness of detail without undue expansion, and conciseness without obscurity. These qualities added to the exalted moral precepts which it inculcates give it the greatest value as an ethical system for the use of the profession and of the people.

9. In this strife, which has lasted ten long years, many utterances, spoken and written, have doubtless stung consciences and offended pride; but was there ever contest without painful incidents, was ever contestant exempt from blame? Let the disaffected yield to truth and justice, let their rancor cease, let there be a truce, and there will surely follow peace, good will, harmony, union, prosperity, good fellowship, and oblivion of the past! Again all loyal members of the profession fervently exhort the disaffected to cease consorting with the enemies of truth and justice and unite with the great national confraternity to sustain scientific medicine. Such a close union would be most beneficient to the nation, glorious to the profession, honorable to all, and to the best interests of individuals. Charlatanism and crafty ignorance would then quake at sight of the solid phalanx of intelligent honesty.

A CONSERVATIVE MEMBER.

MISCELLANY.

OPHTHALMOLOGICAL SECTION OF THE PAN-AMERICAN MEDICAL CONGRESS.—Dr. Julian J. Chisolm of Baltimore, who is the Chief of the Ophthalmological Section of the Congress, has organized his Department with the following gentlemen, well known, as ophthalmic surgeons.

The honorable presidents of this Section are: Dr. Herman Knapp, New York; Dr. Eugene Smith, Detroit; Dr. Stephen C. Ayres, Cincinnati; Dr. X. C. Scott, Cleveland; Dr. Abner Calhoun, Atlanta; Dr. Herbert Harlan, Baltimore: Dr. Chas. W. Kollock, Charleston; Dr. Stephen C. Richy, Washton; Dr. Jose Ramous, City of Mexico: Dr. G. C. Savage, Nashville; Dr. J. E. Minney Topeka; Dr. W. H. Carmelt, New Haven; Dr. H. J. Baldwin, Montgomery; Dr. Aurelio Alareo, Lima, Peru; Dr. Carlos Finley, Havana, Cuba; Dr. Hasket Derby, Boston; Dr. J. C. Kipp, Newark; Dr. Dudley S. Reynolds, Louisville; Dr. Maximo Gienfuagos, Santiago; Dr. Chas. E. Michel, St. Louis; Dr. Samuel D. Risley, Philadelphia; Dr. R. H. Lewis, Raleigh; Dr. T. E. Murrill, Little Rock; Dr. E. C. Rivers, Denver; Dr. C. M. Shields, Richmond; Dr. J. W. Fulton, St. Paul.

In the Advisory Council are the following ophthalmic Surgeons: Dr. Adolph Alt, St. Louis; Dr. L. W. Fox, Philadelphia; Dr. Geo. T. Stevens, New York; Dr. Edward Jackson, Philadelphia: Dr. B. A. Randall, Philadelphia; Dr. H. V. Wurdeman, Milwaukee; Dr. R. Sattler, Cincinnati; Dr. J. J. Thompson, Kansas City; Dr. L. Connor, Detroit; Dr. R. L. Randolph, Baltimore; Dr. J. A. White, Richmond; Dr. S. M. Burnett, Washington; Dr. A. B. Baxter, Cleveland; Dr. J. P. Parker, Kansas City.

Dr. Geo. M. Gould, of Philadelphia, English-speaking Secretary; Dr. J. Harris Pierpont, of Pensacola, Spanish-speaking Secretary.

SECTION ON ANATOMY OF THE PAN-AMERICAN MEDICAL CONGRESS to be held at Washington, United States of America, September 5, 1893. Executive President, Dr. John B. Roberts, 1627 Walnut Street, Philadelphia, Pa. Secretaries, Dr. D. S. Lamb, (English speaking); Dr. A. M. Fermandes, (Spanish speaking) 194 W. 10th St., Mew York, N. Y.

This Section will be devoted to the study of Human and Comparative Anatomy and of Biology as departments of natural science as well as in their relations to practical medicine and surgery. Members of the medical profession in Latin American countries are urged to prepare scientific communications to be read before the Section. Much valuable material will thus be collected and articles of scientific value will find permanent place in the Transactions of the Congress.

The regulations applying to papers and discussions, which have been adopted by the Executive Committee of the Congress are as follows:

Contributors are required to forward abstracts of papers not to exceed six hundred words each, to be in the hands of the Secretary-General not later than the tenth of July, 1893. These abstracts shall be translated into English, French, Spanish and Portuguese, and shall be placed upon the program which has not been thus presented by abstract. Abstracts will be translated by the Literary Bureau of the Congress at the request of contributors, and should be forwarded through the Secretaries of Sections. Papers to be presented to Sections must not consume more than twenty minutes each in reading, and when of greater length should be read by abstract not exceeding twenty minutes in length. Papers read by abstract may be printed in full in the transactions, subject to approval by the Editorial Committee. Papers and discussions will be printed in the language in which they may be presented. All papers read in the Sections shall be surrendered to Secretaries of the Sections; all addresses read in the General Session shall be surrendered to Secretary-General as soon as read; and all discussions shall be at once reduced to writing by the participants.

The Executive President of the Section asks the cooperation of all interested in Anatomy and Biology, in making the deliberations of the Section valuable to those present at the meeting and worthy of preservation in the Volume of Transactions of the Congress.

HIGHER MEDICAL EDUCATION AND THE WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA.—It will encourage the friends of higher medical education to know that all matriculates hereafter entering the Woman's Medical College of Pennsylvania must take four annual courses of lectures before obtaining the degree of Doctor of Medicine. This Philadelphia school for women has long been in favor of advanced standards; and with four compulsory graded courses of seven months each ought to prove its efficiency in supplying the community with well educated women physicians.

OFFICIAL LIST OF CHANGES in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from February 18, 1893, to February 24, 1893.

Under the authority of an Act of Congress approved February 8, 1893, Capt. James A. Finley, Asst. Surgeon, is, by direction of the President, placed upon the retired list of the Army, to date from February 16, 1893, the date of his acceptance of his appointment under the provisions of said Act.

Major James P. Kimball, Surgeon U. S. A., is granted leave of absence for three months, on surgeon's certificate of disability, with permission to leave the Dept. of Texas.

OFFICIAL LIST OF CHANGES in the Medical Corps of the U. S. Navy, for the Week Ending February 25, 1893.

P. A. Surgeon E. P. Stone, ordered to Naval Hospital, Chelsea, Mass.

Surgeon C. U. Gravatt, from Maval Hospital, New York, March 3, and granted three months' leave.